

A- Oral Presentations

1- Infertility, Gynecology

O-1

Prognostic models in infertility

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There is a strong need for distinction between couples with a relatively good prognosis and couples with poor fertility prospects. Clinical experience or 'gut-feeling' of clinicians was the only available 'tool'. Comparison of the predictions made by clinicians based on clinical experience demonstrated a substantial reproducibility of the assessment of spontaneous conception chances, but a very slight to fair reproducibility of the assessment of IVF-ET success rates, thereby demonstrating the need for models that predict the outcome of IVF-ET. The present talk will discuss first: the chance of spontaneous pregnancy for subfertile couples and second: the chance of success of different treatment modalities including IVF and ICSI

Key words: Spontaneous pregnancy, Subfertile couples, IVF, ICSI.

O-2

Fibroids and infertility

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Introduction: The role of fibroids in reproduction remains controversial. The mechanism of effect is unknown but proposed theories include dysfunctional uterine contractility, impairing sperm migration and ovum transport, alteration in the vascularity of the endometrium adversely affecting implantation and placentation, and by tubal occlusion. Fibroids have been associated with both infertility and spontaneous pregnancy loss. However, the evidence for causal relationship is less than ideal.

Materials and Methods: A review of the current IVF, reproductive surgery and obstetric literature involving the association of fibroids with fertility was undertaken. An attempt was made to stratify the information according to the size and location

of the fibroids. Surgical methodology and use of medical adjuvant therapy was reviewed.

Results: Most of the evidence that associates fibroids and infertility is from observational series using the patients as their own controls and from meta-analysis of these series. Myomectomy by any access route (laparotomy, laparoscopy, or hysteroscopy) confers subsequent pregnancy rates ranging from 10-75%. Mode of access does not seem to influence subsequent pregnancy rates. Myomectomy has also been associated with a reduction in spontaneous pregnancy losses.

Conclusion: The available evidence suggests that fibroids that distort the endometrial cavity (whether submucosal or intramural) appear to adversely affect fertility and should be removed. Further investigation is required to conclusively demonstrate a cause-effect relationship. In addition, the optimal surgical technique and the usefulness of adjuvant medical therapy require further study.

Key words: Fibroids, Infertility, Surgical technique.

O-3

Understanding endometriosis

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This lecture will show that it is reasonable to conclude that there exists no or only very limited robust evidence today for endometriosis per se causing subfertility, that there is no support for the contention that medical treatment of minimal and mild endometriosis improves pregnancy chances in subfertile couples, and finally that there is statistical evidence for a slight beneficial effect of surgical removal of the lesions, but that the clinical relevance of this is only limited and that the effect may be short-lived. The same holds true for occult disease: no evidence exists to support the contention that medical treatment of occult endometriosis improves pregnancy chances in subfertile couples. Although statistical evidence does exist for a slight beneficial effect of surgical removal of minimal and mild lesions, the clinical relevance of less severe forms of endometriosis, i.e. occult disease, is undefined. Occult disease can (and should) not be removed. Medical treatment will render minimal and mild disease only temporarily invisible, allowing the lesions to re-emerge with time; surgical treatment can only remove visible lesions but will inevitably leave

behind dozens, if not hundreds of invisible (occult) ones, which after removal of the visible lesions, may develop into minimal (visible) endometriosis and proceed from there. The problem remains to identify those women whose minimal and mild endometriosis will develop into moderate and severe disease with adhesion and endometrioma formation to such an extent that fertility will be affected. On the long run, all treatments are necessarily (theoretically and in practice) deemed to be ineffective, also in patients with visible disease since, if anything, they will leave behind numerous occult lesions, and, more importantly, they will leave the genetic predisposition and pathophysiological mechanism unaffected that lead to the development of endometriosis in the first place. The disease will recur with time. The main question then is: will the patient succeed in achieving a pregnancy in the interval during which therapy has temporarily reduced the disease to its occult form?

Key words: Endometriosis, Pregnancy, Subfertility.

O-4

Chlamydia and infertility

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The majority of *Chlamydia trachomatis* (CT) lower genital tract infections in women is asymptomatic, but may give rise to pelvic inflammatory disease and tubal infertility. The reference standard for diagnosing tubal pathology in infertile women is laparoscopy with tubal testing. However, laparoscopy is an invasive and expensive procedure, requiring general anaesthesia and operating facilities.

Owing to these disadvantages, laparoscopy is unsuitable to be applied as a screening procedure on a large scale. It would be preferable to estimate the risk of tubal pathology before laparoscopy and to select only high-risk patients for this procedure. For the risk assessment of tubal pathology in infertile women CT IgG antibody testing (CAT) in serum is widely used.

CAT is an inexpensive and non-invasive screening test, but its predictive value for tubal factor infertility has limitations. Clinicians should be aware of factors known to affect the diagnostic accuracy of CAT (as the antigenic composition of the test used, and the definition of tubal factor infertility applied).

In lower genital tract infections, an adequate immune response is considered essential to clear the pathogen to prevent its ascendance to the upper genital tract. Most women show an adequate immune response to CT infection, but some have an inadequate response and may develop persistent infections ascending to the upper genital tract and increasing the risk for tubal factor infertility. Host immune factors are considered determinants of the course of CT infections, and genetic variations in TLR and NOD genes may affect the risk for persistence of infections and the development of late sequelae. A positive CAT is indicative of a previous infection but not of a persistent infection. Measuring serological markers of persistence, of which CRP seems promising, in CAT positive women may identify a subgroup of infertile women with the highest risk of tubal pathology.

Key words: *Chlamydia trachomatis*, Infection, Infertility.

O-5

Outpatient management of ovarian hyperstimulation

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Introduction: Ovarian hyperstimulation syndrome (OHSS) is the most serious complication of gonadotropin administration. We developed a systematic protocol for minimizing the risk of OHSS in IVF cycles, followed by early outpatient intervention aimed at avoiding hospitalization and minimizing the progression and complications of OHSS.

Materials and Methods: Strategies to reduce the risk of OHSS included individualized FSH doses, reducing the ovulatory dose of hCG and withholding gonadotropins to allow E2 levels to decrease before hCG administration. If OHSS developed, we promoted active outpatient intervention in the early stages of OHSS, including vigilant fluid management at home, early outpatient paracentesis and judicious colloid replacement.

Results: Moderate to severe OHSS developed in <2% of IVF cycles over a 12 year period (1997-2009). Nearly all cases developed >10 days after hCG administration, and all such women were pregnant. Affected patients monitored daily weight, abdominal circumference, fluid intake and 24h urine output measurements at home. Outpatient transvaginal paracentesis was

performed for ascitic fluid pockets > 5-6cm. Oliguria and hemoconcentration were treated by oral rehydration and hydroxyethyl starch infusion at the time of paracentesis. Hospitalization was rarely needed for symptoms unresponsive to outpatient management.

Conclusion: Vigilant monitoring and outpatient intervention in the early stages of OHSS (including paracentesis and colloid administration) can be used to avoid hospitalization while minimizing the progression and complications of OHSS.

Key words: OHSS, Complications, Hospitalization.

O-6

Factors influence the fertility ability after myomectomy

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Introduction: Uterine fibroids are one of the most common seen benign tumors of the uterus. The appearance of uterine fibroids has been linked to infertility in different degrees according to different locations, numbers, sizes and types. Considering surgery is the main treatment of uterine fibroids, the complications of surgery should be taking into account. Postoperative adhesion formation may influence postoperative fertility. There is still no sufficient evident about myomectomy's positive role in treating myomas. We analyze the different types, locations, numbers, sizes and many other factors related to myomectomy of fibroids' different impact on postoperative fertility of patients with infertile complaints before surgery, to find out myomectomy's role in treating infertility.

Materials and Methods: 78 patients enrolled in the study, including 15 among them who were diagnosed as infertile. Patients were followed-up for 2 years postoperatively. Data of almost every aspect associated with uterine fibroids and myomectomy were collected, and analyzed.

Results: With the use of multivariable logistic regression analyze, age has a p-value of 0.02, with the OR value of 0.7 and the 95% CI (0.6, 1.0).

This is the only independent factor which may influence the postoperative pregnancy rate, in a negative way. Other factors such as the presentation of infertility history, the location, size, number, entering the uterine cavity or not, types of the myoma and the surgery all have a p-value of

above 0.005 and the difference they have upon the postoperative pregnancy rate are not significant.

Conclusion: To those who have uterine myomas, myomectomy may be an option for treatment, because postoperative pregnancy rate seems to increase significantly. Infertility may take place after the surgery for postoperative pelvic adhesion or potential factors that might cause problems on getting pregnant. For patients of whom uterine myomas seem to be the only problem, if have complaint of spontaneous abortion, problem may be solved after myomectomy. Age is the only independent factors that could influence fertility after surgery. The older the patient is the harder can she gets pregnant postoperatively. Therefore early surgical treatment is recommended once myomas are found in the women in reproductive age. Myomas located in the anterior or posterior part of the uterine body have the similar impact on the postoperative pregnancy rate. Location, size, number, entering the uterine cavity or not, types of the myoma and the surgery do not affect the postoperative pregnancy rate.

Key words: Infertility, Pregnancy, Fibroids, Myomectomy.

O-7

Sun, sand and eggs; the reproductive tourism story

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Introduction: Reproductive tourism, where childless couples travel abroad to seek fertility treatment, is an increasing phenomenon, which serves couples in many ways. The reasons for seeking treatment in other countries are varied. Many countries simply do not have advanced IVF programs in place or do not allow it legally. Other reasons include lower costs of treatment and a desire to find sperm and egg donors of similar ethnic make-up as the infertile couple. Foreign couples also appreciate not having to wait long for an appointment, even if it means traveling to India.

Materials and Methods: We at our centers, decided to retrospectively analyze the trend in the influx of patients coming from abroad, over a period of three years, from January 2004 to December 2006. The study included all overseas patients who had visited our center for treatments

like IUI, IVF, ICSI, donor egg IVF and gestational surrogacy. Those availing of surrogacy included patients with MRKH Syndrome, Asherman's syndrome, those with history of recurrent pregnancy loss and single parents from abroad.

Results: In the year 2004, out of a total of 120 cycles, 9 cycles were done for patients coming from abroad (7.5%). Out of these 9 cycles, 3 (33.3%) cycles were of regular IVF, 1 of ICSI (11.1%) and 5 (55.6%) of donor egg IVF. In 2005, the percentage of cycles for patients from abroad increased to 10.6% (17/160). Of these, 5 (29.4%) were regular IVF cycles, 2 (11.8%) were ICSI, 7(41.2%) were donor egg IVF, 2(11.8%) were for surrogacy and 1(5.8%) for IUI. In 2006, out of a total of 200 cycles, 30 (15.0%) were done for overseas patients. Of these, 7 (23.3%) were IVF cycles, 3(10.0%) were ICSI cycles, 11(36.7%) were donor egg IVF cycles, 7 (23.3%) were for surrogacy and 2 (6.7%) were for IUI.

Conclusion: Cheaper prices, high-quality health care and the availability of donor eggs and surrogates are drawing an increasing number of couples to Thailand, Eastern Europe, Russia, China and India. In the English-speaking world, India has a big advantage because of the availability of English-speaking doctors. The real benefit for many couples is relaxed laws. One of the biggest attractions offered by Indian ART clinics is gestational surrogacy. The ICMR permits surrogates to claim monetary compensation in addition to routine expenses and antenatal care, a facility not provided for by many countries. This makes it easier for couples to find willing surrogate mothers in India. The number of surrogate births here has more than doubled in the past two years. Indian ART centers are also willing to treat women who have been deemed too old or overweight by the British National Health Service (NHS) for IVF treatment.

Key words: Reproductive tourism, India, Surrogacy, expense.

O-8

Complications of operative laparoscopy, how to prevent, recognize and manage

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"The only way for a surgeon not to have complications is not to perform surgery" Surgery is an art, the more difficult and severe the

pathology, the higher the risk of complications. The more experienced the surgeon, the risk of complications is lower, the more normal the anatomy, the less chance of complications. The better physical health that the patient is in, the less complications will occur. Despite performing the perfect surgery, and the exercise of caution by the surgeon, there is still a possibility that complications will exist. Surgeons should do their best to avoid complications, but when they happen they should be able to recognize it, manage it by themselves or request appropriate consultation. Often it is not the complication which causes problems for the patient and the physician; rather it is the complication of the complication, which causes problems for the patient and the physician.

Key words: Complication, Surgery, Pathology.

O-9

Role of robots, simulators and intelligent instruments in minimally invasive surgery

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Video Laparoscopy developed by Camran Nezhat, MD in the late 70's and early 80's revolutionized modern day operative laparoscopy. It converted operative laparoscopy from the single eye, one man band endoscopic surgery, to a new era of operating on the images on the monitors as an orchestra. It was also demonstrated and published as early as 1985 by Nezhat that the most advanced pathology can be managed effectively, and with less complications endoscopically. He stated that whenever and wherever in the body a cavity exists or can be created, operative laparoscopy is preferable to open surgery. The limiting factor for operative laparoscopy is the skill and experience of the surgeon and the availability of the proper instrumentation.

Key words: Video laparoscopy, Operative laparoscopy, Pathology.

O-10

Towards a better understanding of endometrial receptivity during controlled ovarian hyperstimulation cycles

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Controlled ovarian stimulation is believed to influence negatively endometrial receptivity in stimulated cycles. Such influence is likely the result of an altered endocrine milieu mediated by supraphysiologic levels of sex steroid hormones and by the medical treatment per se utilized during stimulation. While the assessment of endometrial function remains highly controversial in the absence of definitive markers of receptivity, profound endometrial developmental alterations have been observed during stimulated cycles. These include endometrial maturation advancement in the late follicular and early luteal phases, followed by dyssynchronous endometrial differentiation and maturation delay in the mid-luteal phase. Poor ovarian stimulation practices may induce an advancement in endometrial maturation, significant enough to generate an out-of-phase 'window of implantation' deleterious to pregnancy rates. This review describes the influence of various ovarian stimulation protocols on endometrial receptivity, and entertains several adjusted stimulation approaches to improve the overall success of our infertility treatments.

Key words: *Controlled ovarian stimulation, Endometrial receptivity, Infertility treatments.*

O-11

Hysteroscopic endometrial embryo delivery (SEED/HEED) in IVF

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Since the inception of in vitro fertilization (IVF), the procedure has seen many advances that have significantly increased accuracy and reliability of the procedures and improved pregnancy rates as well as reducing complication rates. The benefits of blastocyst stage transfer have been established for the routine blind transfer technique of catheter introduction into the uterine cavity when a patient produces a large number of oocytes or has proven capacity to produce blastocysts. However, recent recommendations in using lower medication dosages for the controlled ovarian hyperstimulation, and in patients with lower response or advanced age, the number of developing embryos are limited and cleavage stage

embryo transfers may be more advantageous. Also, since a significant number of embryos develop poorly beyond day three; early transfer is clinically prudent. 18 patients with Infertility of various origins underwent Hysteroscopic Endometrial Embryo Delivery (HEED) on day three after fertilization. Controlled ovarian hyperstimulation was done using standard protocols. Transvaginal oocyte retrieval was performed under local anesthesia with mild sedation. All women received some type of luteal support, be it progesterone or HCG. Oocytes were fertilized and cultured in early cleavage medium (Irvine Scientific) at 37°C and 5% CO₂ in air. Embryos were transferred at 70-76 hours post fertilization. Of pregnancies that occurred with transfer on day three, thirty percent resulted in miscarriage or biochemical pregnancy. Only one multiple pregnancy occurred. Six (33%) patients have ongoing or delivered healthy infants. There were no untoward side effects from the use of the endoscope. These results using Hysteroscopic Endometrial Embryo Delivery (HEED) show that the technique is very effective with cleavage stage embryos. The use of the endoscopic approach affords a replicable visually confirmed placement of the embryos in a visually directed and determined position in the uterine cavity that would afford better embryo development and reduced complications from ensuing pregnancies. Our findings could offer new hope of success for a large number of low prognosis IVF patients when embryo transfer would be deemed to have a better result for uterine transfer on day three after fertilization.

Key words: *Hysteroscopic endometrial embryo delivery, IVF, Embryos.*

O-12

Treatment of implantation failure in IVF

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Implantation is a highly integrated and coordinated process of endocrine and immune regulation, and hence etiology of implantation failure (IF) is mostly unexplained except for poor oocytes quality of aged women. IF can be defined as repetition of unsuccessful implantation in more than three times of transfers despite containing at least one embryo of good quality each time. While a great stride of progress in IVF has been made in the past three decades, treatment of IF remained relatively slow.

A gradual accumulation of our knowledge toward implantation has now provided several treatment modalities for IF. In the first part of presentation, fundamental events occurring during the three distinctive phases of implantation process are described. In the initial phase of preparation, endocrine as well as immune signals of embryo origin are released for embryo reception. In the second phase of invasion, an acute hCG-stimulated inflammatory reaction, progesterone-mediated endometrial decidualization and maternal immune response to embryonic antigens are aroused in parallel to tissue remodeling to accommodate embryo. In the final phase of early placentation, inflammatory reaction subsides as maternal immune reaction comes into a steady state by completion of decidua formation and establishment of maternal allo-immune tolerance against embryonic antigens. In the second part, four major modalities for treatments of IF currently available will be introduced.

The first one is two-step embryo transfer in which one embryo of inferior quality is transferred on day 3 followed by transfer on day 5 with one embryo of superior quality, resulting in significantly higher implantation rate as compared to that recorded in single time transfer with two embryos. The second is hCG injection into uterine cervix in the receptive phase after embryo transfer, taking advantage of invasion-promoting action of hCG proven in an in vitro model. However, efficacy of this method is not confirmed and should be left for further testing. The third is stimulation of endometrium embryo transfer (SEET), the principle of which is to enhance cross-talk between embryo and endometrium by intrauterine injection of embryo culture supernatant before transfer. Efficacy of this method is reported apparently remarkable. The fourth is parallel transfer of hCG-activated autologous peripheral blood mononuclear cells (PBMC) prior to one single blastocyst transfer. This gives a notable effectiveness only for women under 40 years.

Key words: Implantation failure, Oocytes quality, Etiology.

O-13

Epidemiology of infertility in Iran

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Infertility is a common problem, affecting perhaps 12-15% of normal population, the majority of whom now seek medical care. The aim of this review is to determine the prevalence and etiology of infertility in Iran. Our approach to the problem of infertility attempts an explicit merging of epidemiological research designs, methods of data collection and analysis, and interpretive insights to provide improved understanding of the factors underlying infertility in Iran.

Key words: Infertility, Etiology, Iran.

O-14

Study the effect of N-Acetyl-Cysteine in the treatment of women with polycystic ovary syndrome

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Introduction: Polycystic ovary syndrome (PCOS) is the most common endocrinopathy in women and the most common cause of anovulatory infertility, affecting 5-10% of women in reproductive ages. The effect of insulin resistance (IR) and hyperinsulinemia in pathophysiology and features of PCOS show the importance of study the efficacy of insulin-lowering drugs in these patients but treatment with insulin sensitizers in women with PCOS lead to elevation in plasma homocysteine (Hcy) levels which have been implicated as a risk factor for cardiovascular disease (CVD), deep vein thrombosis, thromboembolism, pre eclampsia and recurrent pregnancy loss. Administration of N-Acetyl-Cysteine (NAC) by inhibiting increased oxidative stress, have been shown to prevent hyperglycemia-induced IR and reduce plasma Hcy levels. Ultimate goal of this survey is study the effect of NAC in treatment of women with PCOS presenting to the Infertility and Reproductive Health Research Center of Shahid Beheshti University in 1385-86. and if the effectiveness of NAC in reduction of plasma Hcy levels, improvement of peripheral insulin sensitivity, lipid profile, hormonal level and ovulation be demonstrated this study will have an important role in women's health especially in long-term because the above agents are risk factors of CVD, diabetes, hypertension, thrombosis and endometrial cancer in patients with PCOS.

Materials and Methods: In a prospective double blind clinical trial study, 46 women with PCOS

referring to Infertility Research Center will be divided into two groups of intervention (under treatment by 1.8 g/day NAC) and control (with placebo) after matching. Hormonal and biochemical parameters before and at the end of the treatment will be evaluated and an oral glucose tolerance test (OGTT) will be performed. Necessary ratios and indices will be calculated. And during 6 weeks of treatment, ovulation and side effects will be assessed. Finally data will be analyzed statistically.

Key words: Polycystic ovary syndrome, Insulin resistance, Metabolic syndrome X, Homocysteine, N-acetyl-cysteine.

O-15

Improvement of pregnancy outcome in IVF cycles by tubal ligation in cases of hydrosalpinx

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Introduction: Tubal ligation is one of the common factors resulting infertility due to tubal factors. Distal tubal occlusion may lead to hydrosalpinx formation. It has been demonstrated that the fluid of hydrosalpinx can affect on the implantation rate. The theories explaining the detrimental effect of hydrosalpinges on IVF outcomes include the following: A) mechanical washout of the transferred embryos through tubo-uterine reflux of hydrosalpinx fluid, B) direct embryotoxic effect on uterine cavity and prevention of embryo development, C) distributed expression of the cytotoxic factors such as increasing the peri-implantation endometrial HOXA10 expression possibly by the lack of nutrients.

All of these mechanisms reduced implantation rate and increased miscarriage. In different studies and meta-analysis the efficacy of tubal ligation was established. Different methods of surgery have been introduced for this intervention. Performing a surgical intervention such as salpingectomy, tubal occlusion, aspiration of the hydrosalpinx fluid, or salpingostomy, prior to the IVF cycles in women with hydrosalpinges is thought increase the likelihood of successful outcome. As decision making for patients who have suffered from infertility to undergo a surgical procedure to remove fallopian tubes prior to IVF and surgical procedures are not without risks. Therefore it is important to select the simplest methods with the

highest beneficial effects and no effect on the ovarian circulation. Cochrane studies in 2010 showed that the efficacy of salpingectomy and tubal ligation is similar but the laparoscopic tubal ligation is better and less invasive than salpingectomy. An alternative method in severe pelvic adhesions is fluid aspiration before treatment by ultrasound but, the evidence is not enough to show the efficacy of fluid aspiration in pregnancy outcomes. Proximal tubal ligation by Essure via hysteroscopy is another option that was demonstrated in some studies that can be useful and without risks of surgery especially in patients with severe pelvic adhesions.

Conclusion: Surgical intervention of hydrosalinx is recommended for hydrosalpinges before IVF procedures. The intervention method is related to the patient condition, surgeon experience.

Key words: Hydrosalinx, IVF, Implantation failure, Tubal ligation.

O-16

Protein/creatinine ratio in random urine as a rapid valuable criterion in diagnosis of pre-eclampsia in pregnant women

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Introduction: The purpose of this study was to determine the value of the protein – creatinine ratio in prediction of 24-hour urine total protein among women with suspected preeclampsia

Materials and Methods: A total 154 pregnant women who were suspected to preeclampsia were enrolled in observational analytic study. The gestational age was 24 or more. Exclusion criteria were no concurrent diagnosis of chronic hypertension, diabetes mellitus or preexisting renal disease. A protein-creatinine (pr/cr) ratio was obtained in a random sample, and protein of 24 hours urine was measured by collection of urine during 24 hours. Sensitivity and specificity of the protein-creatinine ratio for significant and severe proteinuria that was based on 24-hour urine total protein were calculated.

Results: A total of 154 women were evaluated. The random pr/cr ratio was strongly correlated with 24-hour urine protein levels. The optimal

pr/cr ratio was 0.19. In 9 patients 24- hour urine protein levels were 2gr/day or more and the pr/cr ratio were > 0.8.

Conclusion: There is strongly correlation between random urine pr/cr ratios with 24-hour urine protein in diagnosis of severe pre-eclampsia. Therefore, this test can be a rapid and sensitive test for diagnosis and management of the patients and reducing the maternal morbidity.

Key words: Pre-eclampsia, Eclampsia, Protein, Protein/creatinine ratio.

O-17

Evaluating the effect of the metformin treatment on ICSI in infertile PCOS women

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Introduction: Insulin resistance is common in women with polycystic ovary syndrome (PCOS) and cause poor outcome of infertility treatment. The aim of this study was to assess the effect of treatment with metformin on outcome of ICSI in infertile PCOS women.

Materials and Methods: A randomized clinical trial study was carried out in infertile women with PCOS, before ICSI, referred to infertility clinic of Mirza Koochakhan Hospital of Tehran University of Medical Sciences, from 2006 to 2008. The patients were randomized in 2 groups of metformin and placebo and in each groups were divided into BMI <28kg/m² and >28kg/m².

Results: Of 52 study women 26 (50%) were in metformin and placebo groups. Mean +SD of age were 29.8+4.9 versus 29.4+5.9 in the metformin and placebo groups respectively. Treatment with metformin, in subgroup of BMI<28 kg/m², significantly increased the number of mature follicle, embryo, oocytes and mature oocytes. But in subgroups of BMI>28kg/m², there was no significant difference in metformin and placebo groups. Metformin treatment caused more chemical and clinical pregnancy rates, and less abortion rate in overweight patients and normal weight and all women, but the differences were not significant. Logistic regression analysis showed adjusting number of mature follicle, embryo, quality A embryo and oocyte and BMI, kind of treatment has no significant effect on clinical pregnancy rates.

Conclusion: Among normal weight PCOS women, effect of treatment of metformin is better than overweight PCOS women. However, further studies are needed.

Key words: Polycystic ovary syndrome, Metformin, ICSI, Pregnancy.

O-18

Metformin decreased ovarian volume and effect on metabolic and hormonal in PCOS

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Introduction: The poly cystic ovary syndrome (PCOS) is associated with reproductive morbidity and increased risk for endometrial cancer, diagnosis and treatment is especially important because PCOS is now thought to increase metabolic and cardiovascular risks.

The aim of objective of this study was to assess the effects of metformin treatment for 3 months on ovarian volume, metabolic and hormonal assay in PCOS patients.

Materials and Methods: This is a randomized clinical trial on 28 women with PCOS who referred to infertility clinic. The anthropometric characteristics of the patients mean bilateral ovarian volume and plasma level of FBS, lipid profile, LH, FSH, Estradiol, Testosterone, 17 OHP, DHEAS, CRP, Homocystein (HCy) before and after treatment with 1500 mg metformin in divided dose daily for 3 months were evaluated.

Results: A significant reduction in mean ovarian volume (ml) (11.70+4.31 vs. 8.27+3.71 p<0.05), BMI (kg/m²) (28.11+4.55 vs. 26.84+4.55 p<0.05), CRP (mg/l) (12.92+2.46 vs. 10.56+2.01 p<0.05), HCy (µg/ml) (10.26+1.02 vs. 9.15+0.77 p<0.05), HDL (mg/dl) (50.84+6.45 vs 55.15+3.91 p<0.05), LDL (mg/dl) (101.08+11.15 vs. 91.50+11.04 p<0.05) and serum androgen level after 3 months treatment with metformin was seen. Before treatment only 25% of patients had regular cycles but after 3 months administration of metformin 65.38% of the women with menstrual disturbances achieved more regular menstruation and 2 patients became pregnant during study.

Conclusion: Metformin therapy leads to reduction of ovarian volume. This reduction may reflect decreased mass of androgen producing tissues and causes return regular menstrual cycles. Metformin improves insulin sensitivity, lipid profile it decreases HCy and CRP in PCOS patients and this is a protective factor against the adverse cardiovascular effects on insulin resistance and insulin excess.

Key words: Homocysteine, Metabolic syndrome, Polycystic ovary syndrome, Metformin.

O-19

Comparison the accuracy of serum level of AMH, FSH and antral follicular count, for success prediction of intracytoplasmic sperm injection in infertile patients in Ahvaz Imam Khomeini Hospital

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Introduction: To determine the accuracy of antimullerian hormone (AMH) as a marker for ovarian reserve and to compare its value with day-3 serum FSH level and antral follicle count.

Setting: Imam Khomeini Hospital, Medical Sciences and Health Jundishapour University.

Patients: Seventy women are undergoing assisted reproductive technology cycles, with sequential sampling.

Materials and Methods: The number of retrieved oocyte count for determination of poor or good responder patients.

Results: The basal serum AMH level and antral follicle count was correlated with the number of retrieved oocyte, 0.599 and 0.674 respectively, but basal serum FSH level has weakly reverse correlation (0.11). Basal serum AMH level has the greatest statistically significant AUC than antral follicle count and serum FSH level; 0.75, 0.58, and 0.43 respectively.

Conclusion: The serum AMH level is a good predictor of ovarian reserve.

Key words: Antimullerian hormone, Ovarian reserve, FSH level, Antral follicle.

O-20

Study on serum Anti Mullerian Hormone level during ovulation in patients with polycystic ovaries and its relation to response of treatment

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Introduction: Optimal evaluation of women and proper treatment are essential for successful outcome of assisted reproductive technology

(ART). The identification of both low and high responder before treatment may decrease cycle cancelation rate and side-effects such as ovarian hyperstimulation syndrome. Recently a new endocrine marker, anti mullerian hormone (AMH) has been evaluated by several groups as a marker of ovarian response; however the data are conflicting. This study aims at evaluating the role of this hormone in predicting ovarian response in polycystic ovaries in ovulation induction.

Materials and Methods: In a case-control setting 60 patients with polycystic ovary syndrome (PCO) and 60 otherwise infertile women who were candidate of ART was measured before mid after ovulation induction in both groups and was compared. Likewise, in the case group, serum AMH was assessed as a predictor of ovarian response.

Results: Mean level of pretreatment serum AMH was 2.9+1.1 (median: 2.6) pg/ml and 1.4+ 0.7 (median: 1.2) pg/ml in the case and control group, respectively ($p<0.001$). The mean level of post – treatment serum AMH was 4.0+1.2 (median: 3.7) pg/ml and 1.5+0.8 (median: 1.5) pg/ml in the case and control groups respectively ($p<0.001$). Increase of serum AMH after treatment was significantly higher in the case group. Adequate, inadequate and excess response was seen in 55%, 31.7% and 13.3% of the patients in hyper response group. The increase of serum AMH level after treatment was significantly highest in the group with inadequate response and the lowest in the group with excess response.

Conclusion: In accordance with the previous reports our study showed that the mean serum level of AMH is 2-3 times higher in infertile women with PCO comparing with otherwise infertile counterparts. High pretreatment level of serum AMH may predict the hyper responsiveness to ovulation induction. However due to abnormal, distribution proposing a cut off point is very hard.

Key words: Polycystic ovary syndrome, Ovulation prediction, Anti mullerian hormone.

O-21

The incidence of congenital anomalies in infants have been born by assisted reproductive technology (ART)

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Introduction: Infertility is one of the important problems in obstetrics and gynecology that is mostly shown in 14% of couples. Nowadays there are many kinds of advanced assisted reproductive technology (ART) which fertilize ovum outside of body. Many of studies show that congenital anomalies in newborns have increased due to this kind of treatment. Because of the importance of health in newborns and lack of exact data on the other hand we decided to get information about correlation between ART and congenital anomalies by evaluating the incidence of congenital anomalies in two groups of newborns which one of them have been born by normal pregnancy and the second group by ART pregnancy.

Materials and Methods: In this historical cohort study we extract data from newborn's dossier in Sanandaj Besat Hospital from 2006 to 2008 and analyze them with SPSS software.

Results: Among these evaluated couples, 68 cases of infertility were treatment by ART and 136 cases had normal pregnancy. The incidence of congenital anomaly in groups which have used ART was 8.8% and in the other group it was 4.4%. Although our data showed a higher incidence in ART group, there was no significant difference between two groups ($\chi^2=1.59$).

Conclusion: As a result of present study there were not any statistically significant difference between incidence of congenital anomalies in ART pregnancy and normal pregnancy's newborn infants. Although increase of congenital anomalies prevalence have been shown in few studies in Australia, Finland and USA, future studies with large sample size are needed.

Key words: Infertility, ART, Congenital anomaly.

O-22

Comparison of pregnancy and obstetric outcome after transfer of cryopreserved and fresh embryos obtained by ART cycles

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Introduction: Embryo cryopreservation offers several advantages in ART programs. It can provide an increased cumulative pregnancy rate while decreasing the risk of multiple gestations and the risk of OHSS. Frozen-thawed embryo transfer is an affective procedure that allows further possibilities of pregnancy in addition to those obtained after the fresh in vitro fertilization.

Although cryopreservation of embryos is part of most IVF programs, only limited studies on perinatal outcome of children born after replacement of cryopreserved embryos are available today. In this study we evaluate early and late obstetric outcomes in pregnancies by transfer of cryopreserved embryos and compare these outcomes with that of pregnancies by fresh embryo transfer.

Materials and Methods: Five hundred pregnancies by transfer of fresh embryos and two hundred pregnancies by transfer of cryopreserved embryos from March 2007 to March 2009 were included in the study. Data were collected from the registers of two infertility centers. In this follow up study, we compared early and late obstetric outcomes (before and after 20 weeks of gestation) and birth characteristics in pregnancies by fresh embryo transfer and frozen embryo transfer. The results for singletons and twins were compared separately. Statistical analysis of data was performed by using SPSS version 15.0.

Results: Biochemical pregnancy was higher in the frozen groups compared with the fresh groups but this was not significant. Statistically significant higher rates of spontaneous abortion were found in the frozen groups compared with the fresh groups. Significantly lower percentages of pregnancies led to live birth were observed in the frozen groups compared to the fresh groups. No significant difference was found between the groups in other outcomes.

Conclusion: This study shows that lower live birth rate in frozen groups is a reflection of a significant higher percentage of spontaneous abortion in the frozen groups compared with the fresh groups. It might reflect a negative impact from the freezing procedure itself.

Key words: Cryopreserved embryo, ART, Fresh embryo, Outcome.

O-23

Proteome differences of placenta between pre-eclampsia and normal pregnancy

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Introduction: Placenta is a pregnancy unique tissue and despite its major role in pregnancy, little is known about the proteome changes within placenta during pregnancy related diseases such as pre-eclampsia (PE). Therefore, the aim of this study is the analysis of proteome differences between pre-eclamptic and normal full term placentas.

Materials and Methods: Five normal and five severe pre-eclamptic placentas were included in this study. Total placental proteins were extracted and subjected to two-dimensional polyacrylamide gel electrophoresis. After staining, the gels were scanned and the protein spots were analyzed using Image Master 2D Platinum Software. Nonparametric Mann-Whitney test was used for analysis the mean intensity differences of the spots between normal and pre-eclamptic placentas.

Results: Statistical analysis indicated that 17 spots were differently expressed in pre-eclamptic compared to normal placentas ($p < 0.05$). Using MALDI TOF/TOF Mass analysis, 11 out of 17 spots were identified. Among them four proteins (Chloride intracellular channel 3, Apolipoprotein A-I, Transthyretin, Protein disulfide isomerase) were up-regulated while seven (Peroxisredoxin 2, Peroxisredoxin 3, Hsc 70, Cu/Zn-superoxide dismutase, Actin gamma 1 propeptide, Chain A of enoyl-coenzyme A hydratase and HSPgp96) showed decreased expression in PE in comparison with normal placentas.

Conclusion: Down-regulation of proteins with anti-oxidant activities (Peroxisredoxin 2, Peroxisredoxin 3) and altered expression of stress response proteins (Hsc 70, Hsp gp96, protein disulfide isomerase) might play an important role in the pathogenesis of PE.

Key words: Placenta, Proteome, Pre-eclamptic.

O-24

Anti-Mullerian hormone as a predictive factor in assisted reproductive technique of polycystic ovary syndrome patients

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Introduction: This study aimed to assess the relationship between the serum levels of AMH and other hormonal markers and results of assisted reproductive techniques (ART) in PCOS patients.

Materials and Methods: This cohort study was conducted on 60 polycystic ovary syndrome

(PCOs) patients who were candidates for assisted reproductive techniques. In all patients the serum levels of anti-mullerian hormone (AMH), follicle stimulating hormone (FSH) and luteinizing hormone (LH), estradiol (E2), free testosterone (fT), testosterone (T) and inhibin B were measured in the 3rd day of menstrual cycle. The relationship between serum level of measured hormonal markers with retrieved oocytes, mature oocytes, the number of transferred fetus and pregnancy rate were assessed. The cut-off value for the serum level of AMH and retrieved oocytes were determined.

Results: There was a significant direct correlation between the serum MIS (AMH) level with number of total picked up oocytes ($r=0.412$), mature oocytes ($r=0.472$) and embryo transfer ($r=0.291$). There was a linear and significant correlation between inhibin B and fertilization ($r=0.283$). Cut-off point for AMH level according to presence or absence of pregnancy was 4.8 ng/ml and it was not statistically significant ($p=0.655$). Area under curve (AUC) was 0.543. Cut-off point for MIS (AMH) according to picked up oocytes was 2.7 ng/ml with area under the curve (ROC curve) of 0.724 (CI= 0.591-0.831) ($p=0.002$). Patients with PCOS who had AMH more than 2.7 ng/ml, the number of retrieved oocytes (6 or more) was higher than MIS/AMH < 2.7 ng/ml ($p=0.002$).

Conclusion: As a marker of ovarian responsiveness to controlled ovarian hyperstimulation (COH) and despite a small sample size of our study, it is revealed that pretreatment MIS/AMH is highly associated with the number of mature oocytes retrieved during COH in PCOs women.

Key words: Anti-mullerian hormone, Polycystic ovary syndrome, Assisted reproductive technique.

O-25

Anxiety and mood disorders in infertile women referred to neuropsychological department due to mental disorder because of infertility

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Introduction: Infertility is one important problem of reproductive health. The necessity of reproduction to survive the human's generation has been eclipsed by infertility having considered the psychological and social aspects of infertility; we aimed to assess the prevalence of mood and anxiety disorders in infertile women.

Materials and Methods: This is a descriptive study on infertile women referred to Yahyanejad Hospital, neuropsychological department due to mental disorder of infertility in Babol, during 2007-2008. Totally 353 patients were evaluated by using General Health Questionnaire and those with scores more than cut off point (28) were considered as high risk group for psychiatric disorders (102). High risk group were interviewed by two psychiatrists and evaluated for mood and anxiety disorders based on DSM IV criteria.

Results: The mean age of patients was 28.7 years. Of them 69.4% have more than elementary education and 70% were housewives. Therapeutic interventions had led to pregnancy in 32% of them. Medical management and intrauterine insemination (IUI) were the most common treatments and female causes of infertility were more common than the male causes. The most common disorder was general anxiety (44.1%). Other anxiety disorders were reported in 11.8% and depression was seen in 30.4%. There was not significant correlation between the tendency for psychiatric disorders and age, sex, job, duration of infertility, and educational status. There was significant relationship between the type of therapeutic intervention (IUI) and high risk for psychiatric disorders ($p < 0.05$).

Conclusion: We suggest that psychiatric evaluation should be in the first step of infertility treatment and anxiety management techniques should be taught to high risks patients.

Key words: Depression, Infertility, Anxiety.

O-26

Autologous fibrin glue for tuboplasty

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Introduction: Tuboplasty is a difficult procedure in gynecology and require microsurgery technique. Tissue sealant was introduced for hollow viscose anastomosis such as tuboplasty, but they have some complication such as viral infection and production of antibodies against coagulation factors. In addition, high price of commercial glue lead to expensive operation. The new point in this study is introducing and using of new autologous fibrin glue for tuboplasty.

Materials and Methods: This study was done in Shahid Beheshti Hospital of Isfahan Medical Sciences University (2008). Two patients whom their tubes were ligated several years ago were selected. They wanted to have pregnancy due to second marriage. From 150 cc of their blood, 3 cc of fibrin sealant was produced by new method that introduced by senior author (Dr. Rasti). After laparotomy and exploration of tubes two ends of tube in each side was prepared for anastomosis with 2 stay sutures by prolene 7/0. The alignments of tube were got and after passage of nylon strand (1) thorough the tube, the rest of anastomosis was performed by autologous fibrin sealant. After 3 minutes the strand was removed and the abdominal wall was repaired in anatomical orders. Three months later the hystrosalpingography was done for evaluation of tube patency.

Results: The mean time for anastomosis was 15 minutes. The patencies of tubes were documented by HSG three months after operation. One of the patients had intrauterine pregnancy 9 months after operation.

Conclusion: Because of easy application, short operation time and excellent results we recommend use of this fibrin sealant for tuboplasty. Specially this sealant is autologous and it has no risks such as blood born disease and catastrophic bleeding due to creation of antibody against coagulation factor that were reported after use of commercial fibrin glue.

Key words: Tuboplast, Autologous fibrin glue, Microsurgery.

O-27

Combination N-acetyl cysteine and clomiphene citrate in clomiphene citrate-resistant polycystic ovary syndrome

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Introduction: Clomiphene citrate therapeutic failure is a common encounter in polycystic ovary syndrome (PCOS) patients. Our objective was to

evaluate the effect of combination therapy of N-acetyl cysteine (NAC) and clomiphene citrate in clomiphene citrate-resistant PCOS.

Materials and Methods: This was a double blind randomized clinical trial performed on 93 women 18-41 years old with clomiphene citrate resistant PCOS that for treatment of infertility referred to gynecology clinic of Ali Ebn-e Abitaleb (a) teaching hospital of Zahedan, Iran at 2008. In onset all of the patients receive a primary therapy of clomiphene citrate 100mg/day for 5 days (at day 3 to 7 of the cycle). For combination therapy on the same time, one group (53 patients) were given NAC 1.2mg/day orally, and the other group (40 patients) were given vitamin C tablet (as placebo). Then, for assay of estradiol level (by radioimmunoassay, direct double-antibody kit) and number of follicles ≥ 18 mm, all patients were evaluated at 13th days of cycle. Results were compared through SPSS (version 17.0) with T student test and Chi-square test.

Results: After combination therapy, Estradiol level in placebo and clomiphene citrate group (1st group) was 180.50 ± 79.39 , and in NAC and clomiphene citrate group (2nd group) was 156.87 ± 81.35 ($p=0.621$). In 1st group ovulation rate and number of patients with follicles ≥ 18 mm was 9 patients (22.5%), and mean number of these follicles was 0.92 ± 0.99 and endometrial thickness was 6.90 ± 2.47 . Whereas, in 2nd group ovulation rate and number of patients with follicles ≥ 18 mm was 29 patients (54.7%), and the mean number of these follicles was 1.89 ± 1.17 and endometrial thickness was 8.31 ± 1.48 ($p=0.003$, $p=0.037$ and $p=0.011$ respectively). In all patients, there were no major and minor drug side effects.

Conclusion: On results of this research, especially decline estradiol level, increase number of ≥ 18 mm follicles and endometrial thickness, and no side effect in NAC recipient group; this drug can suggest as adjuvant drug in clomiphene citrate-resistant PCOS. Of course, the effect of NAC on the hormonal and metabolic profiles of PCOS patients should be further investigated as other insulin-sensitizing agents.

Key words: Polycystic ovary syndrome, Clomiphene citrate-resistant, N-acetyl cysteine, Ovulation rate.

O-28

Evaluating the most prevalent reason of recurrent spontaneous abortion (RSA) in Khorasan province

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Introduction: To compare the risk factors of couples with a history of recurrent spontaneous abortion (RSA) in Khorasan province with the published risk factors for RSA. Approximately 2-4% of all women have RSA; however, RSA is a complex multifactor problem associated with endocrine dysfunction, autoimmune disorders, advanced maternal and paternal age, infectious processes, environmental toxins, congenital or uterine anomalies and male factors (sperm characteristics abnormality such as count, motility and morphology).

Materials and Methods: We gathered histories of 250 couples with RSA who were consulted in Novin Center from 2008 to 2010. The following risk factors were analyzed: endocrine dysfunction, autoimmune disorders, advanced parental age, infection, uterine anomalies, genetic abnormalities and sperm characteristics. Data were collected for comparison. Novin Center is one of the two centers which are working on infertility subjects in Khorasan province.

Results: Among 250 couples with history of RSA, 100 (40%) had unrecognizable risk factors, 62 (24.8%) had sperm characteristics abnormality, 39 (15.6%) had endocrine dysfunction, 14 (5.6%) had autoimmune disorders, 13 (5.2%) had uterine anomalies, 10 (4%) had genetic abnormalities, 10 (4%) had advanced age and 2 (0.8%) had infection.

Conclusion: Abnormality in male factors is the most prevalent reason of RSA in Khorasan, therefore, semen analysis is an important test in the clinical management of RSA couples in Khorasan province.

Key words: Recurrent spontaneous abortion, Khorasan province, Pregnancy.

O-29

The impact of combination thromboprophylaxis on patients with unexplained recurrent spontaneous abortions

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Introduction: The role of inflammatory cytokines and local placental thrombosis in patients with unexplained recurrent spontaneous abortion (URSA) has been shown. Since low molecular weight heparin (LMWH) and acetyl salicylic acid (ASA) have both anti-inflammatory and anti-coagulant effect, we evaluated their efficacy in patients with URSA, as compared to no treatment. Before this a few studies have been conducted on this subject but none of them applied a case-control investigation for combination therapy.

Materials and Methods: A total of 100 patients with a history of URSA referring to obstetrics clinic in Shiraz University affiliated hospital were randomized to two groups. Fifty patients in group A were treated with LMWH (fragmin 5000 unit SQ twice a day), ASA 80 mg daily and calcium supplement 500 mg daily. Another fifty patients received no thromboprophylaxis. Folic acid and ferrous sulfate were given as routine protocol of pregnant women to both groups. Live birth rate, obstetrical complications, prenatal and neonatal complications and hemorrhagic side effects were recorded.

Results: Both groups were matched for the mean age and mean number of previous abortions were equal. Group A had a higher rate of live birth (83.7%) in comparison to the control group (54%) with p-value <0.05. No maternal or neonatal side effects were seen. There were no differences in obstetrical complications, prenatal and neonatal complications between the two groups.

Conclusion: Thromboprophylaxis with ASA and LMWH seems to be safe and effective in patients with URSA.

Key words: Unexplained recurrent spontaneous abortion, Low molecular weight heparin, Acetyl salicylic acid.

O-30

Association of tumor necrosis factor- α polymorphism with endometriosis in Iranian population

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Introduction: TNF- α is a multifunctional proinflammatory cytokine that plays an important role in the initiation and regulation of immune responses. The concentration of TNF- α is elevated in peritoneal fluid in patients with endometriosis, suggesting that TNF- α may play important role in

pathogenesis and progression of endometriosis as well as associated infertility. The aim of this study is to investigate the relationship between -308G>A polymorphism and endometriosis, for the first time in Iranian population.

Materials and Methods: The study group comprised 89 women with laparoscopic evidence of endometriosis and 105 healthy women as a control group. Genomic DNA from blood was extracted using salting out method. Genotype and allele frequency of -308G>A polymorphism was compared between endometriosis patients and controls using PCR-RFLP method. Statistical analysis was performed using SPSS 13.0 software and χ^2 test and calculation of OR with confidence Intervals (95%). P-value less than or equal to $p < 0.05$ are considered statistical significant.

Results: The distribution of three genotypes -308G/G, -308G/A, -308A/A and allele frequencies of the -308G and A in TNF- α gene in the endometriosis group did not differ from control group.

Conclusion: In contrast to previous studies, no significant correlation between -308G>A TNF- α polymorphism and endometriosis was found. Since this is the first study in Iranian population, further study using a large sample size will be required to confirm our findings.

Key words: TNF- α , Polymorphism, Endometriosis.

O-31

Fertility sparing in young patients with borderline and malignant ovarian tumors: outcomes and pregnancies

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Introduction: Recent studies have showed conservative management in selective patients with borderline and malignant ovarian tumors is safe; therefore this management is considered in patients with ovarian tumor who desire to preserve fertility. This study has been performed to evaluate the clinical outcome and fertility in patients with ovarian tumors who were treated conservatively.

Materials and Methods: All patients who were treated conservatively (preservation of uterus and at least one ovary) or were on follow-up and had recurrence were evaluated in

Vali-e-Asr Hospital during 2000-2004.

Results: Among 410 patients with ovarian tumors, 60 were treated conservatively. Age range was 13-34 years. Twenty-six of patients (43.3%) were desired pregnancy and 34 (56%) patients did not. Three (5%) patients had history of infertility. Histological type of tumors was follows; 15(25%) borderline tumors, 10 (16.7%) epithelial tumors, 26 (43.3%) germ cell tumors, and 9 (15%) sex cord tumors. Range of follow-up time was 12-48 months. Seven term pregnancies in 6 patients had been occurred, 1 in epithelial group, 2 in germ cell group, 1 in sex cord group and 3 in borderline group. Nine patients had recurrence and 2 patients expired including one patient with serous cyst carcinoma (Stage IIIC). This patient had refused radical surgery and referred to our center with recurrence. Another patient had immature teratoma (Stage IIIC).

Conclusion: Conservative surgical management in young patients with stage I (grade 1,2) of epithelial ovarian tumor and sex cord-stromal tumor and patients with borderline and germ cell ovarian tumors could be performed in order to preserve fertility.

Key words: Ovarian cancer, Conservative management, Fertility sparing surgery, Recurrence, Borderline ovarian tumor, Germ cell ovarian tumor, Sex cord tumor.

O-32

Comparing letrozole and clomiphene in combined regimens with gonadotropins in pregnancy rate in patients with clomiphene resistant polycystic ovarian syndrome

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Introduction: Clomiphene citrate is the first-line treatment in patients with ovulatory dysfunction, but it may be associated with side effects for example multiple follicles, multiple pregnancy and adverse effects on endometrial growth. Nowadays, it is considered to use letrozole for induction ovulation. The aim of this study was comparison of letrozole and clomiphene in combined regimes with gonadotropins in pregnancy rate in patients

with clomiphene resistant polycystic ovarian syndrome.

Materials and Methods: This clinical trial study was performed on 120 PCOs patients. We randomly assigned the patients into two groups. Group one received 100mg clomiphene citrate (n=60) and group two received 5mg letrozole (n=60) daily on days 3-7 of their menstrual cycle. Both groups received 150U HMG on days 5-8 of their menstrual cycle. Human chorionic gonadotropin (HCG) at a dose of 5000IU was administered when at least one mature follicle was observed. B-HCG evaluated 2 weeks after HCG administration and two groups compared about size and number of mature follicles, endometrial thickness, Gonadotropin consumption and pregnancy rate. Chi-square, Kolmogorov-Smirnov Test, T Test, Levene Test, Mann-Whitney Test were used in data analysis.

Results: The pregnancy rate in letrozole was higher than clomiphene group (36.7% vs. 33.3%, p=0.702). The average of endometrial thickness in letrozole and clomiphene citrate group was 7.47mm and 7.49mm (p=0.685) The average of number mature follicles in letrozole and clomiphene citrate group was 2.18 and 2.83 (p=0.087). The average of Gonadotropin consumed in both letrozole and clomiphene citrate group was 6.78 (p=0.941).

Conclusion: Letrozole may be an acceptable alternative to clomiphene citrate for ovulation induction in PCOS patients with reduce Gonadotropin dose and without anti-estrogen effects.

Key words: Infertility, Polycystic ovarian syndrome, Letrozole, Clomiphene citrate.

O-33

Investigation of anxiety level in ARTs pregnant women in Tehran 2009

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Introduction: Pregnancy is a normal and pleasant event in women's life, but it often involved with psychological and behavioral changes and can result in stress in some women, particularly in women that their pregnancies is occurred after infertility treatment. This study aims to determine

the anxiety level in ARTs pregnant women undergoing sample infertility center in Tehran.

Materials and Methods: In this cross sectional study, 100 ARTs pregnant women were participated. For data collection two questionnaires was used; Beck Anxiety Inventory (BDI) and personality/demographic questionnaire. Data analysis was performed with SPSS.V.14.

Results: Mean age was 33.7 ± 6.81 and mean of married duration, gestational age and infertility duration was 8.70 ± 5.18 , 20.18 ± 10.8 and 7.37 ± 6.81 respectively. In addition, 52% of participants have academic education, 60% of them were housewife and 54% lived in the outside of Tehran. Of 45 pregnant women in first trimester, 28.9% (n=13) have mild anxiety and 28.9% (n=13) have moderate and sever anxiety. Of 20 pregnant women in second trimester, 35% (n=7) have mild anxiety and 35% (n=7) have moderate and sever anxiety and finally, of 35 20 pregnant women in third trimester, 34/3% (n=12) have mild anxiety and 40% (n=14) have moderate and sever anxiety.

Conclusion: Psychological consultation for ARTs pregnant women can be useful to reduce the anxiety in these women.

Key words: Pregnancy, Anxiety, Infertility treatment.

O-34

Comparative study between ovarian artery Doppler velocimetry and transvaginal ultrasonographic folliculometry for precise ovulation prediction of infertile patients with clomiphene citrate induced cycle

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Introduction: To assess color Doppler velocimetry in comparison with vaginal sonographic follicuometry for determination the time of HGG injection in COH, IUI cycles and effects on outcome.

Design: A prospective, randomized, case control study.

Setting: Reproductive medicine Unit at a University.

Patient(s): Fifty infertile women, with ovulatory factor infertility undergoing COH with clomiphene citrate and HCG.

Materials and Methods: The patients were divided into two groups according to monitoring with color Doppler sonography (n=25) and vaginal

sonography (n=25). Hormonal assay was done in parallel with sonographic study in both groups, then HCG was injected and IUI was performed in two occasions for each patient. At mid luteal phase progesterone level was checked and pregnancy was proved with positive B-HCG test. Leading follicular diameter, endometrial thickness, estradiol assay, PSV-PI-RI, DV by Doppler, progesterone level and B-HCG were measured in all patients.

Results: Leading follicular size and endometrial thickness before HCG injection was similar in two groups. Also progesterone level and pregnancy rate were similar. PSV and leading follicular size before HCG injection had significant correlation coefficient.

Conclusion: COH under monitoring of color Doppler velocimetry has better but not significant prognosis in comparison with COH under monitoring with vaginal sonographic folliculometry. The time of optimum PSV was similar to the time of optimum follicular size before HCG injection.

Key words: Polycystic ovary syndrome, Color Doppler, Ovarian hyper stimulation, Ovarian blood flow.

O-35

Metabolic and endocrine effects of metformin and metformin plus cyclic dydrogestrone in women with polycystic ovarian syndrome

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Introduction: To evaluate the metabolic and endocrine effect of dydrogestrone therapy with or without metformin in women with PCOD.

Materials and Methods: In this prospective study on women with PCOD, 80 women received 1000 mg of metformin, and 80 other cases received 1000 mg metformin plus 10 mg dydrogestrone daily. Body mass index, hormonal and lipid blood profiles, homocysteine blood level, and insulin sensitivities were recorded at baseline and at 3, 6 months.

Results: Total cholesterol levels decreased in metformin plus dydrogestrone group ($p=0.002$) compared with not significant change in metformin group .in contrast with metformin plus dydrogestrel, significant increased level in homocysteine was seen in metformin group ($p=0.002$).

Conclusion: There were no adverse effects of cyclic dydrogesterone plus metformin therapy on metabolic parameters in women with PCOD over a 6-month treatment period.

Key words: Dydrogesterone, Metformin, Polycystic ovarian syndrome.

O-36

The success rate of ICSI in women over 40 years of age with a normal FSH

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Introduction: A survey of pregnancy rate for women over 40 years of age that undergone ICSI.

Materials and Methods: This descriptive-analytical study was performed on 81 infertile women over 40 years of age with different reasons of infertility. All of them had a normal hormonal assay and underwent ICSI in Babol clinic and Fatemeh Zahra centers between the years 2003-2008. The essential data were analyzed by SPSS (16).

Results: In this study the primary infertility was 64.2%. The mean duration of infertility was 12±8.56. The mean for FSH and LH was 6.92±2.62 and 4.82±4.9 consequently. The average number of punctured egg was 6.15±5.42. The average number of transmitted embryo was 2.16±1.91. The most cause of infertility was a male factor (60.5) and tubal factor (29.7). The pregnancy rate was %10 and the birth rate was 3.7%. The average use of medication for stimulation for GONAL F and HMG was 46.21±21.22 and 27.43±22.8 consequently.

Conclusion: Although all women in this study had the normal FSH and LH, the rate of pregnancy specially, the birth rate was very low. Therefore, considering the relative high expenses of treating one cycle (which is almost 20-30 million Rials), and the probable complication due to the treatment and the existence of malignant chromosome embryo. In elderly women, it seems that the treatment of infertility in this group of women must be accompanied by especial sensitivity. It seems that embryo donation and egg donation is preferred.

Key words: ICSI, Old age female, FSH.

O-37

Serum anti-mullerian hormone level after laparoscopic ovarian drilling in women with poly cystic ovary syndrome

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Introduction: Recent studies have suggested that anti-Mullerian hormone (AMH) levels are elevated in PCOS. Laparoscopic ovarian drilling has obvious effect on LH, FSH and DHEAS. The aim of this study is to evaluate changes of serum AMH level after LOD and its correlation with factors like ovulation rate and investigate its efficacy in predicting response to LOD.

Materials and Methods: From 77 patients with PCOS, 54 were eligible to be concluded in the study (38 case and 16 control group). Serum level of AMH, FSH, LH, DHEAS, testosterone, free testosterone and estradiol were checked before LOD and after the procedure with intervals of 1 day, 1 week, 1 month and 2 months. Serum progesterone level also was checked before LOD and after operation on 21st day of 2 succeeding cycles as a marker of ovulation. LOD was performed using three puncture techniques. Data were analyzed by paired t-test.

Results: Our study revealed that median plasma concentration of AMH 1 day after operation was 5.74 ng/ml which was not statistically ($p=0.209$) different from pre operation level (5.9ng/ml). Neither we found any significant different between its level on 1 week (5.68 ng/ml, $p=0.162$), 1 month (5.45 ng/ml, $p=0.160$) and 2 months (6.07 ng/ml, $p=0.102$) post operation. And there was also no significant different between case and control group. Data analysis in case group showed a fall in the serum concentrations of LH, testosterone and free testosterone after LOD.

Conclusion: Several studies have consistently showed that serum AMH levels are elevated in PCOS women compared to controls. The absence in AMH changes might be described as: During LOD all follicles are cauterized but not small follicles, After LOD, only one follicle grows as a leading follicles or technical problem and merits further investigations.

Key words: LOD, PCOS, AMH.

O-38

Comparison of hysteroscopy and histopathology for detection of intrauterine lesions in repeated IVF failure patients

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Introduction: Benign endometrial pathologies can be diagnosed by different diagnostic methods. This retrospective study was designed to evaluate the incidence of uterine pathologies in infertile women with repeated IVF failure and also to determine the accuracy of hysteroscopy for investigation.

Materials and Methods: The study population included 238 infertile women attending the Royan Reproductive Research Centre, Iran, between November 2007 and December 2008. Patients with at least two previous IVF-ET failures were eligible for this study. All hysteroscopies were performed during the follicular phase of the cycle. The histopathologic exams were considered as the gold standard for diagnosis of uterine lesions.

Results: Out of 238 patients with repeated IVF failure that underwent hysteroscopic evaluation, 158 patients (66.4 %) showed normal uterine cavity. Abnormal cavity was found in 80 patients (33.6%). our results showed uterine polyp as a most common abnormality in patients with previous history of IVF failure (19.7%). Hysteroscopy showed sensitivity of 94.4% for endometrial polyp, and 100% for structural submucosal myoma. Our results revealed no difference about pregnancy rate between repeated IVF failure patients who treated by hysteroscopy for a detected uterine abnormality (24.6%) and similar patients with normal uterine cavity (21.2%) in hysteroscopic examinations.

Conclusion: The frequency of intrauterine lesions confirmed by histopathology in patients with recurrent IVF failure ranges from 22.2% to 80%. Hysteroscopy for detecting and treating of intra uterine pathologies in these patients is valuable.

Key words: Hysteroscopy, Histopathology, Intrauterine lesions, Diagnostic indices.

O-39

Clinical correlation between Doppler ultrasonographic parameters in two parts: Endometrium and follicles (in ICSI cycle): a pilot study

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Introduction: To assess the relation between perifollicular perfusion and sub endometrial parameters in color Doppler ultrasonography and outcome in intracytoplasmic sperm injection (ICSI) cycles.

Materials and Methods: In this prospective descriptive pilot study 20 patients were enrolled. Strict inclusion criteria were considered. Routine long protocol was used for ICSI. On the day of follicle retrieval, colour Doppler indices were determined. Sub endometrial pulsatility index (PI) and resistance index (RI) and perifollicular perfusion were assessed. After oocyte retrieval the count of metaphase 2 (M2) oocytes, embryo with grade a quality and the result of cycle were evaluated also.

Results: RI and PI indices had a positive correlation. Follicles with ≥ 18 mm diameter and follicles with $>75\%$ perfusion had a direct relation.

Also, subendometrial RI had a significant relation with follicular status (p-value: 0.04), but there was not a significant triple correlation (between endometrium, follicles and out come).

Conclusion: The mutual effects of vascularization status in two fundamental parts in ART, is still unclear. The evaluation with Doppler ultrasonography should focus on two compartments together as one functional part at the same time. It means even in presence of good markers in each part, the final decision must taken by co-evaluation of follicles and endometrium.

Key words: Doppler sonography, Endometrium, Follicle, ICSI.

O-40

A review of 1360 cases of operative laparoscopy for endometriosis

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Introduction: Endometriosis is a common disease among women in reproductive age and its treatment is one of the most difficult problems for a gynecologist.

Materials and Methods: We studied 1360 patients from 1999 to 2008 with different symptoms of endometriosis such as pain (dysparounia, dysmenorrheal and pain during

defecation or urination), infertility and pressure. The patients were in different stages: stage I 13.3%, stage II 14.6%, stage III 32.6% and stage IV 39.5%.

Results: All patients underwent operative laparoscopy: 502 ovarian cystectomy (endometrioma), 315 salpingo-oophorectomy, 307 endometriotic lesions, 135 laparoscopic hysterectomy, 107 resection of recto vaginal endometriosis, 102 DIE, 27 appendectomy, 6 diaphragmatic endometriosis, 25 urethral endometriosis, 6 bladder endometriosis, one small bowel endometriosis and 15 cases LUNA and LPSN. Post operation fever was seen in 10.5% and blood transfusion in 3.7% of cases. Some other rare complications were one resicovaginal fistula, one ureterovaginal fistula, one urethral damage and 2 bowel injury. Recurrence rates was 2% in stage I, 2% in stage II, 7.1% in stage III and 28.2% in stage IV.

Conclusion: Laparoscopic treatment of endometriosis is the gold standard method for relieve of symptoms by an expert surgeon, there will be low complications.

Key words: Endometriosis, Laparoscopy, Complications.

O-41

Correlation of hysteroscopic findings and pathological results of endometritis in patients with unexplained recurrent spontaneous abortion (RSA) in south of Iran

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Introduction: Chronic endometritis is a condition that is difficult to detect. However, it may be a cause of recurrent abortion in which endometrium is not an ideal place for zygote growth and development. Presence of stromal edema, and either focal or diffuse hyperemia, and in some cases, endometrial micro polyps (less than 1 mm in size), are all hysteroscopic presentations of endometritis. This study attempted to detect Correlation of hysteroscopic findings and pathologic results of endometritis in patients with unexplained recurrent spontaneous abortion (RSA) by doing fluid hysteroscopy and pathologic evaluation of suspicious sites; also relationship between presences of endometritis in patients with primary versus secondary unexplained recurrent spontaneous abortion (RSA).

Materials and Methods: 142 patients with unexplained recurrent spontaneous abortion, in whom hysteroscopy was indicated; were undergone fluid hysteroscopy followed by endometrial biopsy from suspicious areas.

Statistic analysis: Pearson chi-square and Fisher's Exact Test.

Results: Of 142 women (mean age 30 ± 5.92), most were gravid 3 to 5 (84.5%) and had 3 or 4 recurrent abortion (78.9%). 43% had primary and 57% had secondary recurrent spontaneous abortion (RSA).

96 women (67.6%) had positive signs of endometritis found in hysteroscopy; and in 46 patients (32.4%), none of the hysteroscopic signs of endometritis was found. Out of those 96 women with positive hysteroscopic sign(s), in 61 patients (63.5%) endometritis was confirmed pathologically; and other 35 subjects (36.4%) had no evidence of endometritis in pathology ($p < 0.05$, positive predictive value = 63.54%, and negative predictive value = 97.82%). This study showed sensitivity of hysteroscopic findings of endometritis, in patients with unexplained recurrent spontaneous abortion (RSA), is 93.4%, and specificity is 56.25% recurrent spontaneous abortion (RSA). Our study showed another significant result related to primary and secondary recurrent spontaneous abortion (RSA). As our study showed, out of 62 patients with positive hysteroscopic and pathologic results, 14 women (23%) had primary unexplained RSA, but 48 patients (59.3%) were those with secondary RSA. ($p < 0.05$)

Conclusion: Diagnostic hysteroscopy could be a highly sensitive (98.4%) for diagnosis of endometritis in women with

Key words: Chronic endometritis, Recurrent spontaneous abortion, Endometritis.

O-42

Effect of 4% icodextrin solution on the reduction of adhesion formation following gynecological surgery in rabbits

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Introduction: To evaluate the effect of 4% icodextrin on the reduction of adhesion formation in rabbits after traumatizing uterine horns and comparison the effect with sterile water and human amniotic fluid.

Materials and Methods: 30 Female New Zealand white rabbits randomized into 3 groups. The rabbits were anesthetized and an abdominal incision was made, uterine horns were abraded with gauze until bleeding occurred. In the first group as control group 30cc of sterile water, in the second group, 30cc of 4% Adept and the third group received 30cc of human amniotic fluid over the traumatized area before closure of the abdomen. The solutions were labeled only as solution A, B or C, so that the study personnel were blinded to solution identity. On the 7th day after surgery a laparotomy was performed to determine and compare adhesions in rabbits.

Results: There was a significant difference between the mean score of adhesion in 4% icodextrin group in comparison to sterile water group (2.1 ± 0.70) versus (10.4 ± 0.60) respectively ($p < 0.05$), but the difference between the mean score of adhesion in amniotic fluid group in comparison to sterile water group, (2.1 ± 0.70) versus (8.7 ± 0.84) respectively was not significant ($p = 0.10$). The difference between the mean score of adhesion in 4% icodextrin group in comparison to amniotic fluid group (2.1 ± 0.70) versus (8.7 ± 0.84) was significant ($p = 0.00$).

Conclusion: The use of a 4% icodextrin solution is effective to reduce adhesion in a gynecological surgery model in rabbits.

Key words: Icodextrin solution, Human amniotic fluid, Adhesion formation, Rabbit.

O-43

Determination of antiovarian antibodies after laparoscopic ovarian electro cauterization in patients with polycystic ovary syndrome

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Introduction: To determine whether ovarian damage consequent to laparoscopic ovarian electro cauterization may result in the development of humoral autoimmunity and production of antiovarian antibodies (AOA).

Materials and Methods: Sixty-four reproductive-age infertile women (≤ 35 years of age) with

clomiphene citrate-resistant polycystic ovary syndrome (PCOS) and 50 fertile, healthy, reproductive-aged women (≤ 35 years of age) as control group. Laparoscopic ovarian electro cauterization was performed under general anesthesia in clomiphene citrate-resistant PCOS patients for treatment of infertility. Serum samples from 52 patients (before and about 30-40 days after operation) and from 50 fertile healthy controls were assayed for determination of immunoglobulin class-specific AOA (IgM, IgG, and IgA) by using a commercially available ELISA kit that used human ovary as antigen.

Results: A trend of rising in the level of AOA in all isotypes, IgM, IgG, and IgA, was found in sera after operation, compared with the case of sera obtained before operation. But when the ELISA value was calculated according to the formula recommended by the manufacturer, none of the patients were positive for AOA before the surgical intervention, and none of them developed positive AOA after operation. The overall ovulation rate was 81.3%, and the pregnancy rate was 67.2%.

Conclusion: The ovarian trauma consequent to laparoscopic ovarian electro cauterization in patients with resistant PCOS does not result in a significant production of AOA.

Key words: Ovarian damage, Ovarian electro cauterization, Laparoscopy.

O-44

Expression of Toll Like Receptors in fallopian tube, the combination and separate effect of sex hormones on their expression

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Introduction: Toll Like Receptors (TLRs) are the main family of pattern recognition receptors and they recognize pathogen-associated molecular pattern and constitute a major part of the innate immune system. Reports from our laboratory and others have demonstrated the existence of TLRs 1-6 in the female reproductive tract. However, little has been done to identify TLRs 7-10 in the female reproductive tract, particularly in the fallopian tubes. It is also not known if TLR expression in the

fallopian tubes is cycle dependent like their expression in endometrium. In addition, it is not known if sex hormones can influence TLRs expression in fallopian tubes. The aims of this study were to test the existence of TLR1-6 in fallopian tube and also, combination and separate effects of sex hormones on the expression of these receptors in an immortalized human fallopian tube epithelial cell line (OE-E6/E7).

Materials and Methods: RT-PCR was used to show the existence of TLR1-6 genes in fallopian tube tissue and OE-E6/E7 cell line. To compare relative quantities of TLR 1-6 genes expression in OE-E6/E7 cell line, they were treated by different levels of estradiol and progesterone separately, they were divided into ten groups; control (without any additional treatment of sex hormone), E0.1 (0.1nM/ml estradiol), E1 (1nM/ml estradiol), E10 (10nM/ml estradiol), E100 (100nM/ml estradiol), P1 (1nM/ml progesterone), P10 (10nM/ml progesterone), P100 (100nM/ml progesterone) and P1000 (1000nM/ml progesterone) respectively. In addition, The OE-E6/E7 cell line was treated by both estradiol and progesterone in combination and they were divided into four groups; control (without any additional treatment of sex hormone), Menstruation (1nM progesterone and 0.1nM estradiol), Pre-ovulation (6.5nM progesterone and 1.5nM estradiol) and window of implantation (35nM progesterone and 1nM estradiol). Relative TLRs 1-6 expression quantities were compared between these groups using real time quantitative PCR.

Results: TLR1-6 genes were expressed in human fallopian tube tissue and OE-E6/E7 cell line. Our data clearly showed that Estrogen had no effect on the expression of TLRs except TLR1 in OE-E6/E7 cells. In contrast, progesterone had an inhibitory effect on the expression of TLR1-4 genes in this cell line. However, the expression of TLRs 1-6 was altered in OE-E6/E7 with different concentrations of sex hormones in combination. The highest expression of all the TLR genes was in window of implantation group, compared to all other groups.

Conclusion: It seems sex hormones alter the expression of some of the TLRs in human fallopian tube epithelial cells in vitro. Although increasing levels of sex hormones in combination enhanced TLR1-6 genes expression in OE-E6/E7 cells, further experiments are in progress to elucidate the regulatory mechanism behind this novel effect of sex hormones in modulating innate immunity in the human female reproductive tract.

Key words: Innate immunity, Fallopian tube, Toll like receptor, Estrogen, Progesterone.

2- Embryology, Genetics, Stem cell

O-45

Anti-thyroid antibodies and pregnancy loss: lessons from murine models

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Introduction: Tremendous efforts have been done to clarify potential causative effects of anti-thyroid antibodies in pregnancy loss with conflicting results. While according to some reports such antibodies are associated with increased risk of pregnancy loss, others have not found such association. One of the hypotheses which is claimed to be a mechanism of detrimental effect of anti-thyroid antibodies on pregnancy is expression of cognate antigens of these antibodies in reproductive organs and consequent local inflammatory processes results from auto-immune reaction.

Materials and Methods: To this end, in this study we addressed whether thyroid antigens, namely, thyroglobulin (TG) and thyroid peroxidase (TPO) are expressed locally in the murine reproductive organ. Expression of TG and TPO in reproductive organs of non-pregnant and decidua, placenta and ovary of allo-pregnant Balb/c mice (Balb/c×C57BL/6) during early, middle and late stages of pregnancy was evaluated by semi-quantitative RT-PCR. In addition, polyclonal anti-TG and anti-TPO antibodies were produced and expression of these proteins in aforesaid tissues was evaluated by immunohistochemistry, dot blot and western blot analyses.

Results: The results showed that TG or TPO message is neither expressed in reproductive organs of non-pregnant nor in placenta, decidua or ovary of pregnant mice in any stages of pregnancy. The same results were obtained at the protein level. In parallel, serum levels of anti-TG and anti-TPO antibodies in patients with recurrent pregnancy loss

and normal controls were measured and the results showed no statistically difference. In order to test the expression status of TG and TPO in human reproductive tissues, immunohistochemical study of human placenta and endometrial tissues is under study.

Conclusion: Until now, our results do not support direct detrimental effect of such auto-antibodies on reproductive tissues in patients suffering from recurrent abortion.

Key words: Anti-thyroid antibodies, Anti-thyroglobulin, Anti-thyroid peroxidase, Pregnancy, Abortion, Polymerase chain reaction, Immunohistochemistry.

O-46

Molecular and ultrastructural modifications of endometrium during embryo implantation

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The endometrial epithelium, which is surprisingly hostile towards the embryo implantation, acquires functional status supportive to blastocyst acceptance during a defined window that is temporally and spatially restricted, termed as the 'window of implantation (WOI)*'. Despite considerable technical advances in assisted reproductive technologies since the first *in vitro* fertilization birth in 1978, the pregnancy rates are still relatively low due to suboptimal implantation rates in stimulated cycles. Intensive research has been performed to improve the endometrial receptivity and to understand and establish morphological and molecular correlates of embryo implantation. Generally, several physiological events are required for development of a receptive endometrium. The first event is synthesis and secretion of histotroph by the endometrial glandular epithelium, which supports conceptus development. The second event is reorganization of the endometrial luminal epithelium to allow its intimate association with conceptus trophoctoderm. Once trophoctoderm has adhered to the uterine luminal epithelium, the inherently invasive nature of the conceptus must be restricted to a circumscribed region of the endometrium. Implantation and placentation then take place in an environment enriched in immune cells that protect against infectious pathogens and promote inflammatory cytokines for tissue remodeling

while protecting the fetal-placental semiallograft from attack by the maternal immune system. In this panel, various structural, biochemical and molecular events in the endometrium coordinated within the window of implantation that signifies endometrial receptivity will be discussed.

Key words: Endometrium, Implantation, Receptivity, Adhesion molecules.

O-47

Management of physico-chemical factors in an assisted reproductive technology laboratory

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Physico-chemical factors of embryos and gametes surrounded milieu including temperature, pH, CO₂ and O₂ pressures and its chemical composition in fallopian tubes and uterus are extremely controlled by different mechanisms. In addition, gametes and embryos usually do not make contact with air and its content in their natural development direction. Our surrounding air contain more deleterious ingredient that could affect normal development and future health of the resulting embryos. Embryology lab and its standard practice has an important role on success of ART cycles and future health of these children. Concurrent Embryos and gametes are extremely responsive and sensitive to chemical and physical factors during their development process, suggesting that a clean environment is apposite in the ART ward and especially embryology lab. Operation rooms in contact with ART labs are high risk areas for production of volatile organic compounds (VOCs) and other air pollutants; there is evidence that VOCs have deleterious effects on quality of embryo and success of infertility treatments. currently it is believed that careful attention should be paid to the air quality and elimination VOCs in embryology lab. The gametes and embryos should be cultured in media that equilibrated for pH (7.35-7.45) and osmolarity (260-280 mosm/Kg) at 37°C with 100% humidity and 5-6% CO₂ pressure. Culture under oil is suggested because of its physical barrier and it avoids of evaporation and quick CO₂ diffusion. In addition, especial grad of oil with the low level of toxicity should be used. In view of the fact that an important part of ART success rate will come from the standard practice in embryology laboratories, controlling of

humidity, osmolarity, temperature, gas composition and concentration, or a combination of these elements via QC and QA programs has great impact on the outcomes of this technology.

Key words: Assisted Reproductive Techniques (ARTs), Embryology lab, Quality control, Quality assurance, physico-chemical environment.

O-48

Generation of transgenic mice expressing GFP using DNA injection

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Transgenic mice have been instrumental in examining the role of various proteins under both physiological and pathological conditions. The use of fluorescent proteins for *in vivo* imaging has opened many new areas of research. Among the important advances in the field have been the developments of transgenic mice expressing various fluorescent proteins especially green fluorescent protein. Although several protocols are used for generating transgenic mice but DNA injection into pronuclei is the most widely used protocol for the production of transgenic mice.

We could generate mice expressing GFP using cryopreserved embryos and DNA injection. 242 cryopreserved 2PN C57BL/6 embryos were thawed and injected by linear plasmid containing the GFP. Then two cell embryos transferred into oviduct of 5 pseudopregnant female. Finally we could get 10 pups which expressed GFP. We can conclude that cryopreserved 2PN embryos are suitable for generating transgenic mice.

Key words: Transgenic mouse, GFP, DNA injection.

O-49

Oocyte and embryo quality

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Increasing the efficiency of the assisted reproductive technology (ART) procedure by improving pregnancy/implantation rates and at the same time lowering (or avoiding) the risks of multiple pregnancy are the primary goals of the current ART. These aims require a much improved

gamete/embryo testing and selection procedure. Non-invasive and invasive techniques have been proposed which may be able to detect a good-quality oocyte and embryos. As the health of the embryo is largely dictated by the origination gametes, the assessment of oocytes quality should be considered and may be prognostic value. In addition, certain pattern of pronuclei (number and the distribution of nucleoli) at the zygote stage was offered an additional prognostic tool prior to cleavage. Morphological assessment embryos at different stages of preimplantation development were used to select a good quality of embryo for transfer. Recently, a number of new, non-invasive embryo viability tests have been introduced. These tests aim to measure specific molecules from the culture medium to determine what the embryo secreted (proteomic analysis). Preimplantation genetic diagnosis is also one of the practical tools used in ART to improve the chance of conception for infertility cases with poor prognosis. This review will point to non-invasive and invasive methods for selecting the most viable single embryo for transfer may hopefully be achieved.

Key words: Oocyte, Embryo quality, Embryo selection.

O-50

The spermatogonial stem cells: from mouse to human

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Spermatogenesis in mammals begins at puberty (5–7 days and 10–13 years after birth in rodents and man, respectively) and continues throughout life. Production of spermatozoa is a complex cell differentiation process that involves a wide repertoire of cell types residing in the testis. The process is initiated and maintained by a small population of SSCs attached to the basement membrane of the seminiferous tubules. Failure in this process can result into infertility. Maintain, culture and transplantation of spermatogonial stem cells have been suggested to restore the fertility in some infertile patients as a perspective future.

Very little is known about SSCs in humans, in addition to the earlier work of Clermont and colleagues who demonstrated that there are A(dark) and A(pale) spermatogonia, which A(dark) referred to as the reserve stem cells and A(pale) being the renewing stem cells. Recently human SSCs have been propagated successfully.

The SSC transplantation method, a method to assay a functional testis stem pool, was developed in mice by Brinster in 1994 and the restoration has just been done in some animals successfully. Therefore we hope that studies will do the same on human spermatogonial stem cells transplantation in near future. The isolation and cultivation of spermatogonial stem cells (SSCs) help us to study their biological characteristics and their applications in therapeutic approaches. In this presentation, we studied spermatogenesis in rodents and man both.

Key words: Spermatogonial stem cells, Identification, Isolation, Culture.

O-51

Vitrification of human embryos and oocytes

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Introduction: Vitrification of human oocytes and embryos is an attractive cryopreservation method due to its simplicity, rapidity and low cost. Successful vitrification depends on the cryoprotectant(s) utilized and its concentration, the device used and the skill of the operator. Here we present our vitrification methods for oocytes and embryos.

Materials and Methods: A total of 665 oocytes and 532 day-three embryos were vitrified using "Sage Vitrification medium" kit. Oocytes were equilibrated then vitrified in 30% DMSO and EG. An embryo was also vitrified in "Sage Vitrification medium". Briefly, embryos were equilibrated in 10% EG solution then vitrified in 40% EG with 0.6M sucrose. Oocytes were placed on CryoTops and embryos were loaded into open pulled straws. After loading, the device was immediately plunged into liquid nitrogen. During warming, the cryoprotectant was removed in a 1M sucrose solution and then subjected to decreased concentrations of sucrose solutions. Surviving oocytes were ICSIed, while embryos were further cultured before the embryo transfer.

Results: The mean number of warmed oocytes and embryos per patient were 3.7 and 5.1 respectively. The average survival rates of warmed oocytes and embryos were 93.6 and 97% respectively. Higher survival rate was evidenced when embryos were vitrified at the 8-cell stage compared to embryos

vitrified at 6-cell and < 6-cell stage. An average of 2.4 embryos was transferred per patient.

Conclusion: Ultrarapid freezing by vitrification of oocytes, zygotes and 8-cell human embryos results in a very high survival rate. Vitrification is a fast and efficient cryopreservation method that eliminates the need for expensive freezing equipment.

Key words: Ultrarapid freezing, Vitrification, Cryopreservation.

O-52

Multiple large scale deletions of mitochondrial DNA in idiopathic asthenozoospermic men

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Introduction: Low sperm motility is one of the major determinants of male infertility. Massive amounts of energy are consumed by the fast swimming of spermatozoa during fertilization. The mitochondria in the sperm midpiece are the energy generators. The aim of this research was to investigate correlation between large scale deletion mtDNA and low sperm motility in idiopathic Asthenozoospermic men.

Materials and Methods: In this research, a total of 41 semen samples including, 18 normozoospermic men as a control group and 23 asthenozoospermic patients (age range 24-37 years) were collected from Babol IVF centers. Routine semen analysis was performed within 1h according to World Health Organization (WHO, 1999) guidelines. Human spermatozoa were separated by swim up method. Polymerase chain reaction (Long and primer-shift PCR) techniques were used for analysis of multiple large scale mtDNA deletions.

Results: Our analysis PCR products shown two common deletions (4977 and 7.4 kb deletions) and a novel deletion of 4866 bp in mtDNA spermatozoa both asthenospermic and control groups. However, the frequency of multiple mtDNA deletion in asthenospermic men (0.65.22%) was significantly high in comparison with control men (38.89%). Our results also

revealed a negative correlation between sperm motility and the proportion of mtDNA deletions.

Conclusion: According to Our findings, the mtDNA with large scale deletions are transcribed and translated to produce defective protein subunits and result in a progressive decline in the bioenergetics function mitochondria and low sperm motility. Thus, it is necessary to ascertain the molecular basis of these defects in idiopathic asthenospermic cases for better diagnostic and management of infertility treatment/assisted reproductive technique (ART).

Key words: Asthenospermic, Sperm motility, Large scale deletions, mtDNA.

O-53

Interleukin-18 gene promoter polymorphisms and recurrent spontaneous abortion

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Introduction: IL-18 is a multifunctional cytokine capable of inducing either Th1 or Th2 polarization depending on the immunologic milieu. IL-18 is detected at the materno-fetal interface very soon in early pregnancy. Two polymorphisms in the promoter region of the IL-18 gene at positions of -607 and -137 appear to have functional impacts. This study attempts to evaluate the frequency of these two polymorphisms in the IL-18 gene promoter in patients with recurrent spontaneous abortion (RSA) and normal pregnant women.

Materials and Methods: One hundred and two RSA patients and 103 healthy pregnant women were enrolled in this study. Single nucleotide polymorphisms of the IL-18 gene at positions -607 (C/A) and -137 (G/C) were analyzed by the sequence-specific PCR method.

Results: There was no significant association between the allele, genotype, and haplotype frequencies of the two single nucleotide polymorphisms (SNPs) in the IL-18 gene promoter and RSA.

Conclusion: The results of this study showed that IL-18 gene promoter polymorphisms at positions -607 and -137 did not confer susceptibility to RSA in southern Iranian patients.

Key words: IL-8, Polymorphisms, RSA.

O-54

The role of estradiol in regulation of GnRH receptor gene expression in mouse endometrial tissue

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Introduction: The GnRH receptor belongs to a member of the rhodopsinlike G protein-coupled receptor (GPCR) superfamily, which contains a characteristic seven-transmembrane (TM)-domain structure. However, unlike other members of the GPCR family, the mammalian GnRH receptor lacks the entire carboxyl-terminal tail which is known to participate in various aspects of GPCR regulation through interaction with a network of receptor-associated proteins. GnRH acts via the GnRH receptor (GnRHR) and plays a pivotal role in human reproduction by stimulating the synthesis and secretion of gonadotropins from pituitary gonadotropes. Studies have also suggested that GnRH has other extra-pituitary functions in tissues such as placenta, ovary, uterus, prostate gland and breast. The role of Estradiol (E2) in regulating GnRHR expression has been extensively studied at the pituitary level in different species and variety of tissues. However, the GnRHR expression has not been studied in response to E2 in the endometrial tissues.

Materials and Methods: In the present study, we have analyzed the GnRHR mRNA levels in response to E2 in endometrial tissue using real-time PCR (RT-PCR). Ovariectomized mice were given a single intraperitoneal injection of 10, 30, 100, or 1000 ng/20g body weight of 17- β -estradiol-3-benzoate (E2) in 95% olive oil-5% ethanol (vehicle). Endometrial tissues were obtained from these treated mice after 6 h, 12 h, 18 h or 24 h post injection. Individual uterine horns were divided to 4 parts: one part is used for histology and the others were processed for total RNA extraction. Using RT-PCR, the mRNA expression of GnRHR was demonstrated. The data were evaluated by Kruskal-Wallis test and Mann-Whitney test with SPSS analysis. Statistical significance was defined as $p < 0.05$.

Results and Conclusion: We have shown that GnRHR expression was induced in response to E2 in a dose and time dependent manner.

Key words: GnRH, GnRHR, Reproduction, 17- β -estradiol-3-benzoate (E2), Endometrium, RT-PCR, Gene expression, mouse, Ovariectomized.

O-55

Variation in promoter of BAX gene showed a supportive role in repeated pregnancy loss opposite the variations in Exon 1

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Introduction: Recurrent pregnancy loss (RPL) is a critical medical problem in about 0.5-2% of women. Molecular genetics background for spontaneous abortion understands more and more and until now some polymorphisms are reported.

The Bax gene alterations as a pro-apoptotic gene in Women with idiopathic RPL were investigated in this study.

Materials and Methods: The frequency of mutations in Bax gene promoter and exons of 67 idiopathic RPL women in comparison of 70 samples from healthy women were investigated by automated DNA sequencing method.

Results: A statistically significant association between the study and control groups for frequency of allele A to G at nucleotide -179 in Bax promoter region was observed. A G90C and G95A transitions were found in coding region of exon 1 that change amino acid R to K and Q to H respectively. The genotype and allele frequency of these polymorphisms were significant between women with RPL and controls. Our result indicate a supportive role in RPL for A-179G mutation in Bax gene, but two found polymorphisms, G90C and G95A in exon 1, provide a susceptible background for inducing miscarriage.

Conclusion: We believe that the Bax gene has an important role in pregnancy loss. The variation of this gene may help for assessment of RPL and probability of interventional treatment for improving ART outcomes in future.

Key words: ART, Bax gene, Idiopathic RPL.

O-56

Wnt signaling involvement in rat ovarian steroidogenesis

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Introduction: Wnt signaling alteration has been reported to be associated with polycystic ovary and ovarian cancer. This study sought to determine whether inhibition of this signaling pathway may alter steroidogenesis in rat ovarian granulosa cells.

Materials and Methods: Immature female rats were stimulated with PMSG (10 IU), ovaries were removed after 48h and granulosa cells were isolated mechanically. Cells were cultured in the presence of testosterone (0.1 nM) and recombinant human FSH (50ng/ml) for 48h used as control (FSH primed cells). The role of Wnt signaling in estradiol synthesis was assessed by using recombinant human secreted frizzled related protein type 4 (hrSFRP4) as an antagonist of Wnt signaling (0.5 or 50 ng/ml) prior to FSH stimulation. Subsequently, FSH primed granulosa cells were treated with ovine LH (500 ng/ml) or SFRP4 alone or both in combination for further 48h. Cultured media were harvested after 48h or 96h for estradiol (E2) and progesterone (P) detection by an ultrasensitive immunoassay enzyme linked, respectively.

Results: hrSFRP4 treatment prior to FSH stimulation showed a significant decrease of E2 synthesis compared to control. SFRP4 effect on P secretion was dose-dependent. At low concentration (0.5ng/ml) P secretion was increased while this was decreased in the presence of 50 ng/ml of hrSFRP4 compared to control. Similar results were obtained by using LH and low or high concentration of rhSFRP4 in combination.

Conclusion: Our results demonstrate that Wnt signaling modulate steroidogenesis. This may explain the involvement of Wnt signaling pathway in hormonal imbalance and infertility.

Key words: Wnt signaling, Steroidogenesis, Ovarian.

O-57

Effect of hydrostatic pressure on in vitro maturation of oocyte in preovulatory follicles from cryopreserved ovarian tissue

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Introduction: Cryopreservation of ovaries an important technology for medical and scientific applications. Hydrostatic pressure as a physical force is effective in reproduction system. The aim of present study, examine the effect of hydrostatic pressure on in vitro maturation of oocyte from cryopreserved ovarian tissue.

Materials and Methods: Ovaries obtained from 21 day-old Balb/c mice were cryopreserved in ethylene glycol (EG) and dimethyl sulfoxide (DMSO) in MEM- α with fetal bovine serum (FBS) in straw. Preovulatory follicles isolated from frozen/thawed ovarian tissues and divided two groups: pressure positive and pressure negative. In pressure positive group, follicles were subjected to 20 mmHg hydrostatic pressures for 30 min. Preovulatory follicles from fresh ovaries were used as control groups. Then follicles were cultured in culture medium contain 10ng/ml rEGF and 7.5 IU/ml HCG for 24h and assessed for in vitro maturation of oocyte and cell death in cumulus cells.

Results: Our results indicate that, maturation of oocytes increased in pressure positive group compared to pressure negative group in cryopreserved and fresh ovaries. Viability of cumulus cells were reduced in pressure positive group compared to pressure negative group in cryopreserved and fresh ovaries. Hydrostatic pressure didn't changed viability of oocytes. Cryopreservation ovaries decreased viability and maturation of oocytes compared to fresh non-frozen ovaries ($p < 0.05$).

Conclusion: Hydrostatic pressure had the mild effect on cell death incidence in cumulus cells without any effect on oocyte viability. It can be used to improve oocyte in vitro maturation in fresh and frozen ovaries.

Key words: In vitro maturation, Hydrostatic pressure, Cell death, Cryopreservation, Mouse.

O-58

Effect of fibroblast growth factor and hepatocyte growth factor on in vitro maturation and fertilization of mouse oocytes

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Introduction: In vitro maturation (IVM) of oocyte permits the use of immature oocytes in vitro fertilization (IVF). The presence of hepatocyte growth factor (HGF) and fibroblast growth factor (FGF) was investigated in follicular fluid. FGF-4 is key-players in the processes of proliferation and differentiation of oocytes. Also, factors such as HGF that promote the growth of the granulosa cell population help establish and maintain the microenvironment required for oocyte maturation and fertility in the female. Experiments were carried out to determine the specificity of growth factors on maturation of the cumulus-oocyte complex (COC) and germinal vesicle (GV) in vitro.

Materials and Methods: GV and COCs were recovered from female NMRI mice 46-48 hours after administration of an i.p. injection of 5 IU PMSG. COCs were cultured in TCM199 supplemented with 5% FCS (control group) and adding different dosages of FGF (10, 20, 50 and 100 ng/ml) and different dosages of HGF (10, 20, 50 and 100 ng/ml). After 24 hours, metaphase II (MII) oocytes were co-incubated with sperms for 4-6 hours in T6 medium.

Results: Percentage of oocytes maturation in the 10 ng/ml and 20 ng/ml of FGF treatment groups and the rate of fertilization in 20 ng/ml FGF, were significantly higher ($p < 0.05$) than the control group. Also, the percentage of oocytes matured to MII oocytes and the rate of fertilization in 20 ng/ml HGF treatment group were significantly higher than the control group ($p < 0.05$).

Conclusion: HGF and FGF improved the oocytes maturation and fertilization in vitro.

Key words: Fibroblast growth factor, Hepatocyte growth factor, IVM, IVF.

O-59

The effect of ascorbic acid on maturation of mouse follicles isolated from vitrified and non-vitrified ovaries

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Introduction: This study was designed to investigate the effect of ascorbic acid on maturation of mouse prenatal follicles isolated from vitrified and non-vitrified ovaries.

Materials and Methods: This experimental study was carried out on thirty female NMRI mice. One ovary from each mouse was used randomly for the vitrification procedure. Preantral follicles were mechanically isolated from vitrified and non vitrified ovaries and cultured in α -MEM in vitro for 10 days in four groups; non vitrified and non ascorbic acid (NVNA), non vitrified and ascorbic acid (NVA), vitrified and non ascorbic acid (VNA), vitrified and ascorbic acid (VA). Survival rate, diameter of follicle and number of antral follicles were compared in four groups.

Results: The mean diameter of follicles on day 2 of culture in VNA group (151.7 ± 6.4) was lower than in NVNA (158.5 ± 7.2) and NVA (161.9 ± 9.6) groups ($p=0.1$ and $p=0.001$ respectively). At day 4 of culture the mean diameter of follicles in VNA group (202.9 ± 6.2) was lower than in VA (215.9 ± 9.2), NVNA (213.1 ± 11.8) and NVA groups (218.8 ± 8.5) ($p=0.001$). There were no significant differences in the survival rates of follicles and antral formation between different groups.

Conclusion: The ascorbic acid improved the in vitro growth of preantral follicles especially after ovarian vitrification.

Key words: Ascorbic acid, Vitrification, Ovary, In vitro culture.

O-60

Development of a suitable xenograft model for estrogen-dependant breast cancer

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Introduction: BT-474 cells offer an interesting opportunity to investigate various aspects of growth regulation and dissemination in estrogen-dependent breast cancer. Moreover, the capacity of

this cell line to grow and metastasize in immune-deficient mice in combination with high-expression of c-ErbB-2 oncogene makes it a potentially useful model for research in immune therapy. The aim of this study was to develop a useful model for investigating on the effects of sex hormones on hormone-dependent breast cancer behavior.

Materials and Methods: Human breast cancer cell line BT-474 was obtained from the National Cell Bank of Iran; Pasteur Institute. After preparation, a standard dose of 2×10^6 cells was co-inoculated with Matrigel into athymic nude mice orthotopically and heterotopically. Estrogen was supplied to the animals using subcutaneous sustained-release pellets. Tumor size was measured weekly. At the end of the study, animals were sacrificed and tumoral tissues were investigated immunohistochemically for estrogen-receptors and Her2/neu.

Results: Our results showed an increase in take rate and growth rate of BT-474 tumors supplemented with estrogen.

Conclusion: Estrogens and progesterone are frequently used in reproductive medicine. On the other hand, breast cancer is the most prevalent neoplasm in women. Accordingly development of an experimental model for surveying on the reciprocal effects of sex hormones and breast cancer seems necessary. According to the data obtained in the present study, xenograft model can provide an interesting functional strategy for investigating on the influence of sex hormones on breast cancer.

Key words: Breast cancer, Sex hormones, Athymic nude mice.

O-61

Melatonin protects against ischemia-reperfusion injury and prolongs graft survival in heterotopic transplanted cryopreserved mouse ovaries

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Introduction: This study evaluates dose-dependent effects of melatonin on vitrified ovarian tissue from. Neonatal mice transplanted into ovariectomized mature mice.

Materials and Methods: Ovaries from neonate female inbred (Balb/c) mice were vitrified-thawed and grafted heterotopically into ovariectomized mature mice. After transplantation, melatonin (20, 50, 100, 200 mg/kg/day or saline) were applied via gavage to separate groups. Donor-specific IgM and IgG subtype antibodies, Th1 (IL-2 and IFN- γ) and Th2 cytokines (IL-4 and IL-10) and melatonin in the serum of recipients were measured using ELISA or RIA analyses. The subsequent survival (days 1-8 and 32) of the grafted ovaries was scored. Indices of cell proliferation and apoptosis within cumulus-oocyte complexes and stromal cells of tissue grafts were determined on the days mentioned above; 5-BrdU was used to confirm cell proliferation and the TUNEL assay to confirm degradation of nuclear DNA.

Results: Our study showed that with increasing doses of melatonin, the graft lifespan was significantly prolonged. On the other hand, apoptosis in the follicle density was dramatically increased. Allo-specific IgM and IgG2a of recipients were reduced with increasing doses of melatonin. With increasing melatonin, the level of Th1 was marked reduced. However, the effect on Th2 was less pronounced. The variable regimens of melatonin caused higher peak melatonin levels after transplantation.

Conclusion: These findings indicate a novel therapeutic approach, based on modulation of the immune and E/R axes through melatonin as a possible future immunosuppressant and antioxidant in organ transplantation.

Key words: Melatonin, Heterotopic transplantation, Vitrification, Ovary, Immunomodulators, Oxidative stress.

O-62

Ultra structural study of human mature oocytes after vitrification

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Introduction: Oocytes cryopreservation certainly represents one of the most attractive developments in the field of assisted reproduction, but it is still an open problem because of gametes structural sensitivity to the cooling and freezing process and exposure to cryoprotectants. The aim of this work was to determine ultra structural changes that results from vitrification and rewarming of human oocytes in metaphase of meiosis II (MII) or mature stage.

Materials and Methods: This experimental study was done on 30 retrieved MII human oocytes had been yield from patients which have the range of ages 30-40 years. Oocytes divided in two groups: fresh (n=10) and vitrified group (20). Freezing period was about 2-3 months and was done as tree stepwise vitrification and four step warming. Then these oocytes were processed for transmission electron microscopy.

Results: Our finding showed that vitrification caused various degree of cryodamage such as: thickening and heterogenicity of zona, disruption and disappearance of microvilli, formation of intracellular wide vacuoles and canaliculi, hypertrophy and disorganization of mitochondria in most cases.

Conclusion: Although usage of freezed oocytes in assisted reproduction programs has developed, but damages to structural organization of them due to vitrification process could be an important and considerable factor. Even if we have fertilization outcomes with vitrified oocytes, harmful changes should not be ignored within the oocytes. Besides, the results from experimental animal models cannot be expanded and use for human easily, because there are many differences between them. Thus it seems that more studies in this field is necessary.

Key words: Freezed oocytes, Vitrification, Reproduction.

O-63

Transgenerational adequate sample volume is the only essential factor needed for isolation of mesenchymal stem cells from umbilical cord blood

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Introduction: Mesenchymal stem cells (MSC) are promising populations for new clinical concepts. Umbilical cord blood (UCB) was introduced as an important source of MSCs due to its young and less immunogenic cells. However, previous studies showed a success rate of 30% or even complete failure in isolation of MSCs from UCB using regular methods. In some researches effects of negative immunodepletion (NI) and basic fibroblastic growth factor (bFGF) in this isolation was shown. In present study we have investigated the effectiveness of NI, bFGF, combination of both and sample volume for isolation and expansion of MSCs.

Materials and Methods: 60 ml UCB was collected with informed consent. 20 ml of sample was divided into 4 groups. NI was applied for Cells of groups A and B. Cells in groups B and C were cultured in media supplemented with 10ng/ml bFGF, while group D was taken as control. Cells of group E were taken from 40 ml of UCB. We evaluated MSCs isolation regarding morphology, flowcytometry for CD105, CD73, CD34 and CD14, adipogenic and osteogenic differentiation potentials and Growth Characteristics.

Results: By NI approximately one third of cells were depleted. Many of the cells became spindle-shaped after one week. In group C and D, population had heterogeneous morphology in shape and size. Three week after initial seeding, cells showed rounded shape. By the forth week many of them died in groups A, B, C and D and apoptotic cell bodies remained. But interestingly in group E, cells became spindle shape, expanded rapidly and showed appropriate morphological and flowcytometric characteristics and differentiated successfully.

Conclusion: Sample Volume is the only critical factor in isolation of UCB-MSC. Neither bFGF nor NI is effective in isolation of MSCs without having appropriate sample volumes.

Key words: Sample volume, Umbilical cord blood, Mesenchymal stem cells, Negative immunodepletion, bFGF.

O-64

Survey of cisplatin and caffeine synergic effect on sperm parameters in mice

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Introduction: Cisplatin is a potent anticancer drug available to treat many malignancies. Caffeine is

one of the most widely consumed substances. Each of them has side effects on reproductive system and spermatogenesis. The aim of present study is to investigate synergic effect of caffeine and cisplatin on sperm parameters in mice.

Materials and Methods: A total number of 24 mice (balb/c strain) were randomly divided into a control (group I) and three experimental groups (II-IV). Mice in group II-IV received one of caffeine doses (0.01%, 0.05%, and 0.1% in drinking water) for 14 days and treated with 5.5mg/kg cisplatin in 5th day of study by intraperitoneal injection. Their body weight were measured, then the animal were killed and dissected, their testes were weight and left epididymis were isolated and minced in DMEM/F12 media supplemented with FBS, then sperm motility and morphology were studied according to standard criteria. Data were analyzed by one way ANOVA.

Results: There is significant difference between groups in progressive sperm motion ($p < 0.05$), group III (0.05% dose of caffeine) showed the most motility. The body and testes weight didn't show significant difference ($p > 0.05$).

Conclusion: Caffeine improves sperm motion in cisplatin treated animal.

Key words: Cisplatin, Caffeine, Sperm parameters, Mice.

O-65

The effect of intra peritoneal injection of foeniculum vulgare seed alcoholic extract on epididymes, deferens and epididymal sperm reservoir in male wistar rate

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Introduction: Population control with chemical drugs is one of the most human concerns. Side effects of these drugs drive human to use herbal medicine as an alternative. Foeniculum vulgare is one of these drugs which in this study the effects of its seed alcoholic extract on epididymis and deferens epididymal sperm are examined.

Materials and Methods: In this study 2-3 month male Wistar rats with the approximated weight of 190 ± 10 gr were used. Animals were classified into four experimental groups and one control group. The experimental groups received 35, 70, 140 and

280 µl of fennel seed alcoholic extract for 15 days, while physiology serum was injected to control group intra peritoneally (IP). In day 15th, all rats have been unconscious with a mixture of 2% zayelzin and 10% ketamine (100 mg/kg). Then their stomachs were swelled and genital organ epididymis and deferens were excised and weighted with digital scale. Then epididymis was placed in 1ml solution of physiology serum with the temperature of 37°C. Tail of Epididymis has been cut and monotony solution was worn away from it and sperms were counted.

Results: Comparison the weight of epididymis and deferens and the sperm reserve have been shown that there was a significant decrease in 140 and 280 µl experimental groups compared to control group ($p \leq 0.05$).

Conclusion: Significant decreases in sperms count and weight of epididymis is an indicator of effects of alcoholic extraction of fennel seed on male reproduction.

Key words: Fennel alcoholic extract, Rat epididymis, Deferens sperm.

O-66

Effect of albumin gradient, pure sperm and combination of them on separation of X- and Y- bearing human sperms by FISH

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Introduction: First attempts to affect on sexuality of children have been performed several years before determining genetic principles and current methods. Since there more than 500 types of diseases related to sexuality have been detected. Sex selection of children with social, individual, racial, and the other reasons, has been human desire for a long time. Furthermore, it is applicable to animal husbandry industry in quality improvement of animals and attaining a fetus confirming desired sexuality. Scientists believe that based on differences between sperms in size, concentration, movement, surface particularities, and chromosome contents, we can separate sperms containing X and Y chromosome by different methods of washings. Cellular and molecular

biology has gathered various methods such as FISH for separating sperm containing X and Y.

Materials and Methods: In this research, semen samples were obtained from 30 normal healthy donors. This study design to apply the two layer albumin gradient method (experimental 1), pure sperm (experimental 2) and combination of the both albumin gradient and pure sperm (experimental 3) for sex preselection in human sperm by using a double fluorescent in situ hybridization (FISH).

Results: The results show these techniques don't alter the X- to Y-bearing spermatozoa ratio.

Conclusion: We concluded whatever these different sperm washing methods slightly separate X- and y-bearing sperms, but it's not enough for using in clinic. Further studies are needed to develop suitable techniques for enrichment of X- or Y- bearing sperms.

Key words: Sex selection, Fluorescent in situ hybridization, Sperm washing.

O-67

Histomorphological evaluation of fresh ovarian tissue transplanted into mouse back muscles

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Introduction: The objectives of this study were to perform complex characterization of heterotopic heterologous fresh ovarian tissue transplantation including determination of the ability to respond to in vivo recombinant follicular stimulating hormone (r-FSH) treatment, development of retrieved follicles, morphology and vascularization in Bulb C mice.

Materials and Methods: Slices from 12-14 day old Bulb C mice were transplanted into back muscles of ovariectomized 6 week old Bulb C mice intermuscularly. All transplanted mice received intra peritoneal injections of rFSH for 4 weeks. Twenty four hours after the last injection, ovarian tissue was recovered and processed for histology. Microscopic examination was performed to assess development of retrieved follicles, morphology and vascularization. Follicles were counted, measured, and classified as primordial, primary, secondary or antral. Fresh ovarian tissue from the same original source was similarly processed as control group.

Results: All follicle populations in 8 numbers of inter muscular implantation were present. The grafts were well vascularized, with follicles at all stages of development. Numbers of follicles in the transplanted tissue were markedly reduced compared to fresh tissue, with approximately 20% of follicles surviving transplantation procedures. The implanted ovarian tissues in the intermuscular implantation group did not show any evident changes in histology and morphology of follicles except for reduction in size.

Conclusion: This study demonstrates that back muscles are available sites for implantation and have similar rates of acceptance, despite some differences in the details of implantation to other sites which examined in previous studies.

Key words: Ovary, Transplantation, Back muscles, Mouse.

O-68

The protective effect of α -tocopherol on A23187-induced DNA damage in human spermatozoa

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Introduction: Increasing in intracellular calcium and reactive oxygen species (ROS) induce acrosomal reaction (AR). Whereas ROS overproduction has pathological effects. For example they cause DNA damage. Our aim of this study was determination of antioxidant effects of α -tocopherol on sperm DNA damage in control condition and in conditions which AR was induced by A23187 (a calcium ionophore).

Materials and Methods: Normozoospermic semen samples were obtained from 15 volunteers 20-30 years old after 3-5 days of sexual abstinence. Samples were washed, centrifuged and incubated in 37°C and 5% CO₂ until sperms swimmmed-up. Sperms were counted in the supernatant and divided into five groups, each contained 2×10⁶ sperm/ml. Groups 1 to 5, were incubated for 1 hour with Ham's F-10 solution as control group, 1% of ethanol, 10 μ M A23187, 40 μ M α -tocopherol, 10 μ M A23187 + 40 μ M α -tocopherol, respectively. DNA damage was determined by TUNEL technology and evaluated with fluorescence microscopy. AR was assessed by FITC-PSA staining.

Results: α -tocopherol did not induce any changes in DNA damage and AR; Whereas A23187 induced a significant increase in DNA damage and AR as compared with the control group. On the other hand, incubation of sperms in a medium contains A23187 and α -tocopherol showed that α -tocopherol has an ability to prevent the adverse effects of A23187 on DNA integrity and attenuate the effect on AR.

Conclusion: In conclusion, our data support the role of cytoplasmic calcium overload in ROS-mediated sperm DNA damage and suggest that α -tocopherol neutralizes these effects.

Key words: α -tocopherol, Reactive oxygen species, A23187, DNA damage.

O-69

Achieving high survival rate following cryopreservation of isolated prepubertal mouse spermatogonial cells

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Introduction: Isolating spermatogonia cells with high purity and viability and achieving better survival rate following cryopreservation

Materials and Methods: Isolating the cells by Magnetic Activating Cell Sorting (MACS) method using anti CD49f (α 6 integrin) antibody and Dynabeads and freezing in DMSO-based are freezing mediums containing three different FBS concentrations of 50%, 60% and 70%.

Results: The mean (\pm SD) purity of the isolated cells was 92.52 \pm 3.57 (range 92.43–98.25). The cells frozen in group I, II and III had mean 39.60 \pm 1.48 (range 37.98–41.62), 89.05 \pm 3.83 (range 80.83–90.33) and 90.52 \pm 1.71 (range 89.07–92.52) viability, respectively.

Conclusion: Higher viable cell counts and purity can be attained by the use of α 6 integrin and magnetic beads. After the thawing of spermatogonial cells, optimum viability was achieved in freezing media containing 60% FBS.

Key words: Cell viability, α 6 integrin, Magnetic beads.

O-70

Expression of VEGF, MMP2 and IL-8 in adipose derived stem cells (ASCs) of breast cancer patients

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Introduction: Angiogenesis is an important process for progression and metastasis of most types of tumors such as breast cancer. Vascular endothelial growth factor (VEGF), IL-8 and matrix metalloproteinases (MMPs) are reported to play crucial roles in cancer development and metastasis. It has been shown that MSCs recruit to the tumor microenvironment and may contribute to the production of proangiogenic factors. Herein, we investigated the expressions of VEGF, IL-8 and MMP-2 mRNA levels in adipose-derived stem cells (ASCs) of twenty one women with breast cancer.

Materials and Methods: ASCs were isolated from fragments of breast adipose tissue after mincing and incubating with chollagenase. The expression of extracted mRNAs was determined using real-time quantitative RT-PCR. Results were compared to those of a sex and age matched control group.

Results: Relative Quantification (RQ) of VEGF and IL-8 were about 2.4 and 2 folds higher in patients than controls, respectively. The expression of both molecules were higher in patients with stage 3 compared to stage 1 and 2. No difference was found in the expression of MMP-2 between patients and controls. There were a statistically significant correlation between the expression of MMP2 and esterogen/progesteron receptors (ER/PR) expression in breast cancer (p-value<0.05).

Conclusion: These data suggest that the higher expression of VEGF and IL-8 by ASCs of breast cancer patients can probably change the prognosis and susceptibility of women to breast cancer. Thus, these molecules might be introduced as potential therapeutic targets for human breast cancer.

Key words: ASCs, Angiogenesis, VEGF, MMP2, IL-8, Breast cancer.

O-71

Skin stem cells are capable of regenerating epidermis in burn induced hypopigmented patients

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Introduction: Burn induced hypopigmentation is a complication of burning. Nowadays surgery is done to remove the hypopigmented skin but it can be done just for small surface area burns. Autologus skin graft is another alternative treatment but the large donor sites can also be complicated by depigmentation. The purpose of this study is to use autologus skin stem cells to reconstruct the epidermis in a patient with burn induced depigmented skin.

Materials and Methods: First of all a small biopsy was taken from the normal skin in operation room. Epidermis was separated from dermis by NaBr 4N and then epidermal cells were separated from each other by trypsin and mechanical method. The epidermal cell suspension which contains dermoepidermal junction stem cells was sprayed on the depigmented skin area after removal of depigmented epidermis. All of these were done in a section of operation. Afterwards the wound was dressed with amniotic membrane. The patient was revisited two month after and a biopsy was taken from the site of intervention.

Results: After two months epidermis was reconstructed and skin color was partially improved but not completely like normal skin. In histological sections the new epidermis was similar to normal one. Immunohistochemical study of the biopsy with S100 antibody for detection of melanocytes showed the same concentration of these cells as compared to normal skin.

Conclusion: This method is promising for treatment of these patients but more investigations are needed to show that the newly produced melanocytes are how much functional.

Key words: Epidermal cell spray, Burn, Hypopigmentation.

O-72

Use of bone marrow derived autologous stem cells in reconstruction of critical maxillo-mandibular bone defects: an experimental pilot study

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Introduction: Human bone marrow contains a population of bone marrow stromal cells (BMSCs) capable of forming several types of mesenchymal tissues, including bone and cartilage. BMSCs can be isolated, purified and expanded in cell cultures in order to be subsequently implanted *in vivo* to facilitate bone healing. So, our study was designed to use of human BMSCs for reconstruction of maxillo-mandibular critical bone defects.

Materials and Methods: Human MSCs were isolated from bone marrow of the iliac crest of normal volunteers. Mononuclear cells (MNCs) were suspended in DMEM medium containing 10% FBS. When primary cultures became nearly confluent, the cells were detached and used for different passages. The expression of CD90 and CD73 in MSCs were analyzed by flow cytometry. The potential of the isolated cells to differentiate into osteogenic and adipogenic lineages was examined. Alizarin Red and Oil Red staining were performed to establish the differentiated cells.

Results: The results of the flow cytometry showed the high expression of CD90 and CD73 in isolated bone marrow hMSCs. The results of Alizarin Red staining showed nodule-like structures in cultured cells. The results of Oil Red staining in adipogenic culture showed intercellular lipid vacuoles were stained with Oil red.

Conclusion: We presume that the results of flow cytometry, Alizarin Red and Oil Red Staining in MSCs showed the ability of these fresh bone marrow cells to serve as a bone-grafting agent in the treatment of bone defects.

Key words: Bone marrow, Reconstruction, Maxillo-mandibular bone defects.

O-73

Transplantation of bone marrow mesenchymal stem cells can improve polycystic ovaries appearance in rat model

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Introduction: (MSCs) are multipotent cells which are attractive candidates for therapeutic strategies. The mechanisms of repair effects also involve their supplying cytokines for angiogenesis, anti-apoptosis and mitogenesis such as VEGF, IGF-I, TGF β , and bFGF. It has been demonstrated that IGFS and VEGF play an important regulatory role in follicular development in ovary, so we have tested the treatment of polycystic ovary syndrome (PCOS) with bone marrow MSC in rat models.

Materials and Methods: Human MSCs (hMSCs) were isolated from bone marrow then were cultured in DMEM medium containing 10% FBS. The confluent cells were harvested for different passages. The expression of CD90 and CD73 in MSCs were analyzed by flow cytometry. Sprague-Dawley rats received estradiol valerate (EV) to induce polycystic changes in the ovaries. To assess the PCOS models, Daily examination of vaginal smear and histological tests were performed. After 10 weeks of EV injection, the PCOS rats were anesthetized and ovary was exposed and bone marrow hMSCs were injected in to bilateral ovaries of the rats.

Results: The results of flow cytometry showed the high expression of CD90 and CD73 in isolated bone marrow hMSCs. After 10 week, treatment with EV led to the development of constantly cornified vaginal smear with cystic follicle, capsular thickness and absences of corpora lutea.

Conclusion: We presume that the enriched cytokines and growth factors secreted by MSCs played the key role to improve follicle developmental microenvironment for oocyte maturation.

Key words: Bone marrow mesenchymal stem cells, Polycystic ovaries, Oocyte.

O-74

Dedifferentiation of granulosa cells into iPS cells by epigenetic modifications

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Introduction: Epigenetic reprogramming of terminally differentiated cells can modify somatic cells to a pluripotential state. This study tried to

reprogram granulosa cell as a full differentiated cell into pluripotential state by epigenetic changes.

Materials and Methods: Human granulosa cells were cultured in medium containing azacytidine and trichostatine. Some cells were also treated with DMSO that was the dilution solvent of the Azacytidin and Trichostatin. The cells were permeabilized by Streptolysin O then were exposed to the extract of mouse embryonic stem cells. The granulosa cells were cultured in embryonic cell culture condition. Alkaline phosphatase test and also immunocytochemistry were performed 24h, 72h and one week post culture of these reprogrammed cells. The results were compared with control groups.

Results: Granulosa cells that treated with azacytidin and trichostatin expressed alkaline phosphatase and OCT4 24 and 72 hours after exposure to the extract. The cells could also express nanog and SOX2 after 72 hours. However, the expression of these genes reduced after one week. The group that was treated with DMSO, kept the OCT4 expression but not the other markers.

Conclusion: It seems that the extract can induce dedifferentiation in granulosa cells. The previous research that was done on fibroblast cell line and revealed the extract can lead the cells to express OCT4 but not Nanog and Sox2. The inhibitors could increase the number of reprogrammed cells in presence of extract. Lower expression of stemness markers after one week may arise of deficient reprogramming in these cells.

Key words: Reprogramming, Granulosa cell, Dedifferentiation, Azacytidin, Trichostatin, Embryonic stem cell extract.

O-75

Post natal stem cells from human developing wisdom tooth

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Introduction: With the aim of finding suitable stem cell resource for future regenerative purposes, we chose ectomesenchymal tissues of wisdom tooth at Nolla's 6th (N_{6th}) developmental stage due to its nonpareil clinical availability and evaluated N_{6th}-Dental Mesenchymal Stem Cells' (DMSC) characteristics after multi-passaging and cryopreservation.

Materials and Methods: Pulp and follicle of a human-N_{6th}-third molar was achieved through sterile surgery, dissected and digested by collagenase type 1, and obtained single cells were cultured in standard growth-medium. Following multi-passaging and 6 month cryopreservation cells were prepared for immunocytochemistry, immunofluorescent, and flowcytometry assays for MSC markers: Vimentin, CD73, 90, 105, 166, 44, 146, and STRO-1, hematopoietic cell markers: CD14, 34, 45, and HLA-DR, and dentinsialoprotein (DSP); also evaluated for adipogenic and osteogenic differentiation ability, which confirmed by histological staining and RT-PCR.

Results: N_{6th}-DMSCs display similar features as other MSCs do, however, with incredible proliferation capability. These undifferentiated preodontogenic cells (DSP-) Expressed surface proteins typically associated with MSCs but did not express hematopoietic cell markers. Adipocytes differentiated from N_{6th}-DMSCs were positively stained with Oil-Red-O, formed typical lipid clusters, and expressed early 'PPAR- γ 2' and late 'ap2' adipogenic genes. Formation of Alizarin-red positive condensed calcium-phosphate nodules and strong expression of colla1 and osteopontin mRNA, exhibited N_{6th}-DMSCs' osteogenic differentiation potential.

Conclusion: Surpassing clinical availability of developing-N_{6th}-third molars and considerable ability of N_{6th}-DMSCs to provide a large number of stem cells, which can be safely recovered after cryopreservation, quickly restart their robust proliferation, express correct surface antigens and easily induce to differentiated cells render this ancestral population of DMSCs, a viable choice for cryo-banking and future usage in regenerative therapies.

Key words: Dental mesenchymal stem cells, Human third molar tooth, Nolla's 6th developmental stage.

O-76

Studying the role of T regulatory cells in unexplained recurrent spontaneous abortion by Flow cytometry

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Introduction: Recent evidences indicate that parts of the immunoregulation system such as CD4+CD25+ regulatory T (T_{reg}) cells, Th3 cells, Tr1 cells, regulatory NK cells and play very important roles in the maintenance of pregnancy. T_{reg} cells regulated inhibit maternal T cell fetal attack naturally. Recent studies showed that naturally occurring CD4+CD25+ regulatory/suppressor T cells (T_{reg}) regulate not only autoimmunity, but also alloreactivity. CD4+CD25+ T_{reg} cells play a critical role in peripheral tolerance, transplantation tolerance and maternal tolerance to the fetus. Successful reproduction in eutherian mammals depends on interaction between mother and fetus; the formation of an anatomical barrier between mother and fetus. CD4+CD25+ T cells inhibit the immunostimulation of conventional T cells through cell-to-cell contact or immunosuppressive cytokines such as interleukin 10 and transforming growth factor. Here, we studied the role of T_{reg} in recurrent pregnancy loss by comparing the percentage of T_{reg} cell concentration in unexplained recurrent pregnancy loss patients with normal fertile women.

Materials and Methods: Twenty women, with a median age of 28 years, who had had at least three successive miscarriages of unexplained etiology, comprised the URSA group. The diagnosis of “unexplained” abortion was made from the following guidelines to exclude any verifiable causes. Abnormalities of uterus and cervix, karyotypes of abortion couples, endocrine (luteal function defect, hyperprolactinemia, polycystic ovarian syndrome, and hyperandrogenemia) and metabolic (diabetes, insulin resistance, hyperthyroidism, and hypothyroidism) diseases were excluded. Serum samples were analyzed for FSH, LH, E2, PRL, T, free triiodothyronine, free (unbound) thyroxine, TSH, thyroglobulin antibody,

serum glucose, insulin, thrombin, lupus anticoagulant, anticardiolipin antibodies, antinuclear antibodies, thrombophilia. We compared the concentration of Treg cells in peripheral blood of these patients until 20 fertile portions with any history of recurrent pregnancy loss. The procedure was done as below: Venous blood was dispensed into two tubes, then FITC-conjugated anti-CD4 and PE-conjugated anti-CD25 antibodies were added to one tube, and FITC- and PE-conjugated IgG antibodies were added to another tube. After incubation and lysis buffer at room temperature in the dark, then centrifuged, and the supernatants were aspirated. The samples were washed twice with phosphate-buffered saline, the cell pellets were resuspended in fixation buffer, and the cells were analyzed by a FACS Callibur system (Becton Dickinson,) using Cell Quest software.

Results: The proportion of CD4T cells and CD25 Tcells in peripheral blood from URSA patients were decreased significantly. The proportion of CD4+CD25 + T cells was significantly higher in successfully pregnant women than URSA patients.

Conclusion: Inhibition of the immunostimulation of conventional T cells can decrease the percentage of CD4+CD25+ regulatory T cells in peripheral blood, therefore CD4+CD25 + regulatory T cells may serve as a novel biomarker for monitoring in URSA patients.

Key words: Recurrent abortion, Regulatory T cells (T_{reg}) pregnancy, CD4 + CD25+ marker.

O-77

Effectiveness of leukocyte immunotherapy in primary recurrent spontaneous abortion

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Introduction: Recurrent spontaneous abortion (RSA) is defined as three or more sequential abortions before the twentieth week of gestation. There are evidences to support an allo-immunologic mechanism for RSA. One of the methods for treatment of RSA is leukocyte therapy; however there is still controversy about effectiveness of this method.

Materials and Methods: Ninety two non-pregnant women with at least three sequential abortions (60 primary and 32 secondary aborters) recognized as RSA were referred to our Laboratory for immunotherapy. All the cases were immunized by

isolated lymphocytes from their husbands. Fifty to 100 million washed and resuspended mononuclear cells were injected by I.V., S.C., and I.D. route.

The result of each injection was checked by WBC cross matching between couples after four weeks of injections. Immunization was repeated in fifth week to a maximum of 3 times if needed. Eighty one age-matched non-pregnant RSA women (52 primary and 29 secondary aborters) with at least three sequential abortions were also included in this study as controls. The control group was not immunized.

Results: 67 out of 92 (72.8%) immunized cases and 44 out of 81 controls (54.3%) showed a successful outcome of pregnancy ($p < 0.02$). Comparison of primary and secondary aborters indicated a significantly better outcome only in primary (75% vs. 42.3%, $p < 0.001$) but not in secondary aborters (68.8% vs. 75.9%, $p = 0.7$).

Conclusion: The present investigation showed the effectiveness of leukocyte therapy in primary but not in secondary RSA patients. Despite the current controversy and limitation of leukocyte therapy in RSA, the results of our investigation provide evidence supporting the use of allo-immunization in improving the outcome of pregnancy in primary RSA patients.

Key words: Leukocyte therapy, RSA, Pregnancy.

O-78

Colocalisation of gonadotropin inhibitory hormone immunoreactive neurons with agouti-related protein in the arcuate nucleus of the ewe hypothalamus

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Introduction: Gonadotropin inhibitory hormone (GnIH) has a crucial role in inhibiting of reproductive axis. Agouti-related protein (AGRP) as an orexigenic peptide well established. GnIH is documented to have a potent stimulatory effect on feeding in chick. Whether GnIH is an orexigenic in ewe, is unknown. The present study aimed to determine whether GnIH neurons co express with AGRP in arcuate nucleus of hypothalamus of the ewe.

Materials and Methods: Nine ewe were selected and divided into 3 groups of ovariectomized, pre

estrus, and follicular phases ($n=3$ in each group). Expression of GnIH and AGRP and possibility of co expression of GnIH with AGRP in the arcuate nucleus of ewe hypothalamus at each phase was studied by using immunohistochemistry method.

Results: More than 22% of GnIH neurons express AGRP and about 31% of AGRP neurons express GnIH. There was no significant difference between rostral and caudal areas of the arcuate nucleus as well as between groups ($p > 0.05$).

Conclusion: It is likely that AGRP and GnIH neurons along with other neuropeptide in arcuate nucleus, participating in negative energy balance and reproduction, co express to regulate feeding and reproductive behavior in the ewe.

Key words: AGRP, GnIH, Ewe.

O-79

Development of an interesting xenograft model for estrogen- and androgen-responsive ovarian carcinomas

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Introduction: The search for new chemotherapeutic agents in ovarian cancer has been limited by the lack of suitable experimental models of the human disease. OVCAR-3 cultured cells as a human ovarian carcinoma cell line contain cytoplasmic androgen and estrogen receptors. So it seems that OVCAR-3 may be of use for investigations as to the significance of androgens and estrogens in ovarian cancer. The aim of the present study was to designate a xenograft model for estrogen- and androgen-responsive tumors.

Materials and Methods: Human breast cancer cell line OVCAR-3 were obtained from the National Cell Bank of Iran; Pasteur Institute. After preparation, 1.3×10^6 cells were injected s.c. into the athymic nude mice with Matrigel. Then the tumorigenicity and growth rate of tumors were observed. At the end of the study tumors were excised and prepared for pathological examination.

Results: The cultured cells co-inoculated with Matrigel into the nude mice, formed expansile masses which grew progressively within 10 to 12 weeks in all animals. But there was no take rate in the absence of Matrigel. Immunohistochemical study proved the presence of androgen and estrogen receptors in the tumor tissue.

Conclusion: Ovarian cancer is common in industrialized nations, but the exact cause usually is unknown. The demonstration that OVCAR-3 tumor cells in nude mice possess steroid hormone-binding macromolecules provides the basis for unique model for the study of the requisite hormones in human ovarian cancer.

Key words: Ovarian cancer, OVCAR-3, Androgens, Estrogens, Athymic nude mice.

O-80

Letrozole effect on in vitro three-dimensional culture of human endometriotic explants

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Introduction: Letrozole induced growth and angiogenesis of normal human endometrium in culture system. The aim of present work is to determine its effect on human endometrium from endometriosis patient.

Materials and Methods: Endometrial biopsies were cut into small segment and put between two layers of fibrin jell, made by fibrinogen solution (3mg/ml in medium 199 added thrombin). Culture was done for four weeks in standard culture condition and finally growth score calculated. Data were analyzed by Kruskal – Wallis test.

Results: There are significant differences between groups ($p < 0.05$) in growth score and 1 μ M group had the best growth induction effect and highest angiogenesis percent while 10 μ M inhibit endometrial growth.

Conclusion: Letrozole showed dose related effect on human endometriotic tissue.

Key words: Letrozole, Endometrium, Three-dimensional culture.

O-81

Heterochromatin polymorphic variants on chromosomes play role in recurrent pregnancy loss

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Introduction: Recurrent pregnancy loss is still to be a demanding problem for patients and clinicians. Polymorphic variants on chromosomes are considered 'normal', so far. Heterochromatin has no coding potential and nucleolar organizing regions contain genes coding for rRNA, which their variants have been reported in infertility and recurrent abortions. Recent studies by cell biologists suggest that heterochromatin may have important cellular roles in different clinical conditions, including reproduction.

Materials and Methods: In Recurrent Abortion Clinic of Yazd Research and Clinical Centre for Infertility, 583 couples were evaluated for etiologies of RPL. Every probable causes of abortion were rolled-out.

Results: Prevalence of the heterochromatin polymorphic variants in Iranian couples with repeated abortions was 16.9%, which were 8.6% men and 8.3% women. It is clearly higher than normal population.

Conclusion: High structural polymorphic of DNA sequence has been found after analysis of human chromosome. They were with much intrachromosomal and interchromosomal duplication, and contain the largest autosomal block of heterochromatin. Transcriptional activation of constitutive heterochromatic domains of the human genome in response to environmental stress was reported recently. These are characterized by an epigenetic status typical of euchromatic regions. Several studies suggest that heterochromatin plays an essential role in spindle attachment and chromosome movement, meiotic paring, and sister chromatid cohesion. Hence all variants may not be 'normal', it is suggested that variants should not be ignored by cytogeneticists.

Key words: Recurrent pregnancy loss, Heterochromatin, Structural polymorphic.

3- Urology

O-82

The modern management of azoospermia

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Azoospermia affects 5% of investigated infertile men, and originally it was thought to be an untreatable form of infertility. However, with better understanding of patho-physiology and the advent of surgical sperm retrieval (SSR) and intracytoplasmic sperm injection (ICSI), many azoospermic men can now father children. However, as not uncommon in medicine, the wide availability of a successful treatment can lead to its use – or rather misuse – in unsuitable cases. There is now a considerable body of evidence indicating that SSR and ICSI are being inappropriately used. The state-of-the-art modern management of azoospermia as well as the various forms of inappropriate use of its treatments will be discussed in the lecture. Additionally, an evidence-based practical guide of ‘what to do’ and ‘what not to do’ in SSR and ICSI will be presented.

Key words: Azoospermia, Infertility, ICSI.

O-83

The impact of age changes on sperm parameters

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Introduction: Spermatogenesis in mammals including human is affected by environmental factors and age changes. Present study aimed at investigating the sperm parameters in various age groups.

Materials and Methods: Subject's protocols were obtained from infertility clinic, and the semen and sperm analysis in the patients referring for infertility treatment was evaluated retrospectively regarding to the age grouping. Sperm concentration, vitality, motility, progression and morphology were assessed according to WHO guidelines.

Results: One thousand three hundred and fifty protocols were included in this study. Age groups were designed every 10 years. The mean age was 32 ± 5.3 with 30-39 groups as the main major group. Normosperm subjects showed no significant differences in sperm parameters except for vitality that was different $p < 0.03$. Subjects with abnormal sperm parameters differed significantly in concentration; $p < 0.006$, vitality; $p < 0.007$ and motility; $p < 0.03$. Our results showed by increasing the age sperm parameters decreased significant or nonsignificantly.

Conclusion: We conclude that sperm parameters are affected by age changes. However, these changes are more profound in subjects with abnormal sperm parameters.

Key words: Spermatogenesis, Sperm parameters, Age.

O-84

Study of effects of pine needle extract on microstructure of placenta in pregnant mice and some other complications

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Introduction: Herbal medication was common in ancient Iran and has continued to the present day. As chemical drugs, some herbs have side effects too. Nevertheless only destructive effects of some herbs have known yet. Pine needle is a herb medication which is used as abortive agent in some communities. Is it abortive agent really? Has it other destructive effects? These questions induced us to research.

Materials and Methods: Sixteen female BALB/C mice were divided in control 1, control 2 and experimental groups. They expose to males mice for mating and pregnancy. Vaginal plaque was marked as zero day of gestation. Medication was begun from the first day of gestation and continued to end of pregnancy. Experimental mice received pine needle extract and control 1 mice received only normal saline through gavages. Control 2 group received nothing. Animals were cared and every abortion or death was recorded.

Results: We observed no abnormality in control groups, but all of mice were aborted in experimental group. Fifteen died at time of abortion. Histological evaluation of uterus and placenta of these mice, showed abnormal changes such as blood congestion, inflammatory cells infiltration, atrophy and necrosis in placenta.

Conclusion: Other investigators had demonstrated mother death, abortion and histological abnormal changes by pine needle consumption. In this research, death, abortion and histological abnormal changes were recorded too. By comparison of these two results we can conclude that pine needle extract may have destructive effects on mother and fetuses.

Key words: Pine needle, Fetus, Placenta, Abortion.

O-85

Morphology analysis of spermatozoa bound to zona pellucida and correlations with the assessment of the semen and insemination medium

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Introduction: This study aimed to ascertain the ideal form by measuring and assessing spermatozoa removed from the zona pellucida of oocytes that had failed to fertilize in vitro and poor quality embryos. This study hoped to confirm the selectivity of the ZP and investigate any correlation between the morphological categories bound and those found in the ejaculate and insemination medium of the corresponding patients. In addition the morphology in the semen and insemination media was compared to the fertilization outcome.

Materials and Methods: The oocytes or embryo were collected and washed before being placed on a slide and their ZP dissolved using acid tyrodes or 0.1M hydrochloric acid. This enabled the tightly bound spermatozoa to be released, ready for staining with Diff-Quik and assessed directly on the slide. By assessing the spermatozoa bound on the ZP. During this study 1904 spermatozoa were removed from the ZP of the 20 patients with 1214 of these being considered of normal shape. The measurements of the ideal form head from this study were between 4.0-6.0 µm in the length and 2.5- 3.5 µm in the width with the Diff-Quik stain.

Results: This study confirmed the selectivity of the ZP by highly significant increase from average percentage normal in the ejaculate (4.09%) in the insemination medium (6.64%) and to those spermatozoa removed from the ZP (63.8%) alongside a significant reduction in amorphous form. In addition sperm preparation significantly improved the morphology in readiness for insemination.

Conclusion: From the finding of this study no significant correlation was seen between the percentage normal in the ejaculate or insemination medium, and the fertilization outcome.

Key words: Ejaculate medium, Insemination medium, Fertilization outcome.

O-86

Male infertility and polycystic kidney disease – case report

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Introduction: The association of male infertility with adult polycystic kidney disease (APKD) has been reported significantly higher than expected in recent studies, and a possible causal relation between APKD and male infertility may exist. However, it is rare and still unfamiliar to some of the multidisciplinary team colleagues caring for infertile couples. We recently observed an infertile couple with long standing infertility due to azoospermia/cryptozoospermia in an APKD affected patient. Several pathogenetic mechanisms may be responsible for this autosomic dominant disease and its association with infertility. Genetically, it may be due to mutation of one out of three ciliary-centrosomal genes: *PKD1*, *PKD2* and *PKD3* (unmapped).

Materials and Methods: Infertile men diagnosed to have APKD were evaluated by clinical characteristics including testis volume, as well as serum hormone levels, semen analysis, and ultrasonography. Then *PKD1* and *PKD2* were studied utilizing RT-PCR and western blot using DNA and proteins extracted from semen and serum of this infertile man.

Results: Semen analysis revealed low-normal volume, normal pH, and azoospermia/virtual azoospermia. Serum hormones were within the normal range. Ultrasonography demonstrated cystic dilatation of the kidney in the men. Genes' mutation and protein abnormalities found in ciliary-centrosomal proteins *PKD1* and *PKD2*.

Conclusion: Patients should be referred for genetic consultation as well as andrological evaluation of a presentation similar to obstructive azoospermia. Their potential to achieve paternity via surgical sperm retrieval combined with ART is an example of cooperation between medical geneticists, andrologists and gynecologists.

Key words: Male infertility, Adult polycystic kidney disease, ART.

O-87

AZF microdeletions on the Y chromosome of Iranian infertile men

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Introduction: The human Y chromosome contains genes that are essential for spermatogenesis specially those that are located on three major intervals defined as AZFa, AZFb and AZFc. Deletions in these genes may result in spermatogenic failure in patients with non-obstructive azoospermia and oligozoospermia. Widely different frequencies of such deletions (0-55%) have been reported from different populations. The main purpose of this study is to detect the frequency of Y chromosome microdeletions in Iranian patients with non-obstructive azoospermia and fertile control subjects.

Materials and Methods: Multiplex polymerase chain reaction (PCR) was applied using several sequence-tagged site (STS) primer sets, in order to determine Y chromosome microdeletions in 100 infertile males and 50 fertile controls.

Results: 12 (12%) of the patients showed Y chromosome microdeletions and among these patients, deletion in AZFb region was the most frequent (66.67%) followed by AZFc (41.67%), AZFd (33.33%) and AZFa (8.33%) respectively.

Conclusion: Our findings suggest that knowing the prevalence of AZF microdeletions in Iranian infertile men will be informative before starting assisted reproductive treatments.

Key words: Y chromosome, Microdeletion, AZF, Male infertility.

O-88

CFTR gene mutations and male infertility: A molecular study in Iranian patients with non-obstructive azoospermia

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Introduction: Genetic factors cause about 10% of male infertility cases. Among these factors, cystic fibrosis conductance regulator (CFTR) gene mutations are responsible for obstructive forms of male infertility. Also it has been shown that the intact CFTR protein plays an important role in spermatogenesis and sperm maturation. The aim of this study was to study the effect of CFTR gene mutations in non obstructive azoospermia.

Materials and Methods: In the present study the occurrences of common mutations including $\Delta F508$, G542X, N1303K, W1282X, R117H and also IVS-5T polymorphism ; and probable mutations in exons 4, 7, 10, 11, 20 and 21 in the CFTR gene was investigated in 100 non obstructive azoospermic patients and 50 fertile individuals as control group using ARMS-PCR, PCR-RFLP and SSCP-Sequencing methods.

Results: 13 patients (13%) showed 406-6T>C, A120T, I148T, $\Delta F508$, G542X, L1304M mutations, and IVS8-5T polymorphism. None of the mutations was detected in the control group.

Conclusions: The present study indicates that screening for CFTR gene mutations may help for choosing a more appropriate medical treatment method for infertile males candidates for assisted reproductive technologies such as Intra cytoplasmic sperm injection (ICSI).

Key words: Azoospermia, CFTR, Mutation.

O-89

Increased chromosomal instability in lymphocytes of infertile males after exposure to gamma irradiation

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Introduction: There are strong evidences that chromosomal and genetic abnormalities play an important role in the development of male infertility. The present study investigates the induced chromosomal instability and micronucleus formation in blood lymphocytes of infertile men in comparison with fertile men that are exposed to gamma radiation *in vitro*. This study evaluates the possible genomic instability in infertile individuals.

Materials and Methods: Cultures of human lymphocytes were established from whole blood of healthy and infertile donors obtained by venopuncture. Lymphocyte cultures were irradiated to 4Gy gamma-rays generated from a Co-60 source with a dose rate of 1.23 Gy/min, then stimulated with 1% Phytohemagglutinin (PHA) and incubated for 92 hours in a CO₂ incubator. 36 h after culture initiation, cytochalasin B at a final concentration of 4µg/ml was added to the cultures. After 92 h, harvesting and slide making were performed according to standard procedures. 1000 cells were analyzed for each sample to assess the presence or absence of micronuclei.

Results: Our experiments showed a statistically significant difference between the frequencies of micronuclei observed in lymphocytes of infertile individuals exposed to 4 Gy gamma rays compared to healthy donors.

Conclusion: This study indicate that genomic instability in infertile men could probably contributes to the development of an impaired reproductive capacity.

Key words: Infertile men, Blood lymphocyte, Genomic instability, Micronucleus.

O-90

The beneficial effect of Tamoxifen citrate on sperm recovery in infertile men with non-obstructive azoospermia.

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Introduction: About 10% of infertile men have azoospermia. Until 2 decades ago there was no chance of fertility for them. After introducing microinjection (ICSI) many of these men get the chance to be father. But still in many cases of non-obstructive azoospermia, we are not able to find sperm for ICSI. Medications may be able to increase the chance of finding sperm in testis samples. So in this study we evaluated the effect of Tamoxifen citrate on the results of sperm recovery

from testis tissue in infertile men with non-obstructive azoospermia.

Materials and Methods: 32 azoospermic infertile men with proved non-obstructive azoospermia were selected. Tamoxifen was given to them for 3 months. Semen samples and in cases of azoospermia second testis biopsy was taken and the results were compared with the first samples. 12 patients with azoospermia who had testis biopsy before evaluation were also selected as control group and TESE was done for them after 3 months.

Results: According to first testis samples, 13 patients had hypospermatogenesis, 9 had maturation arrest and 10 patients sertoli cell syndrome. After Tamoxifen treatment 6 patients showed sperm in their ejaculates. Of other patients all in hypospermatogenesis group, 75% in maturation group and 20% in sertoli cell group showed sperm in their second testis samples. In control group we only found sperm in two patients with hypospermatogenesis (p=0.002).

Conclusion: Our study showed that of patients with non-obstructive azoospermia with anti-estrogenic drugs like Tamoxifen can improve the results of sperm recovery in testis samples, and so increase the chance of pregnancy by microinjection.

Key words: Male infertility, Azoospermia, Tamoxifen, Microinjection.

O-91

Drug usage and male infertility: An experimental design

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Introduction: Celecoxib is a non steroidal anti-inflammatory drug. Nowadays this drug uses as an analgesic, antipyretic and anti-inflammatory agent frequently. The goal of this survey was to assess the effects of this drug on male-reproductive system functions.

Materials and Methods: Histological studies and measuring of weight (testis, prostate, seminal vesicle and epididimis) and the level of blood testosterone were done on 50 rats with 200-230 gr weight in five groups. Control group (no drug given), sham group (solvent drug: Di- methyl sulfoxide), 3 cases groups (orally celecoxib 10, 20 and 40mg/kg given daily) for 15 days. In the end of 15 days, heart blood sampling for measuring

serum testosterone level accomplished after that reproductive systems separated and prepared for histological study.

Results: No significant differences in mean weight of body testis, epididymis and seminal vesicle in control and case groups. But significant differences are seen in the mean weight of prostate per body weight in case group (40mg/kg) in compared with control group. No differences seem between control and case groups in arrangement mode, nuclei shape and cytoplasm in histological examination in spermatogonia and primary spermatocytes in transverse section of somniferous tubules celecoxib in case group (40mg/kg) can decrease.

Conclusion: In case group (40mg/kg) number of sertoli cells decreased due to decrease testosterone level. Use of high doses of celecoxib can decreased size and number of lydig cells and this is cause of decreased testosterone hormone.

Key words: Celecoxib, Male, Infertility, Testosterone hormone.

O-92

The effects of single dosage of organophosphate on testis tissue in mice

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Introduction: Organophosphate (OP) pesticide widely used in agriculture that inhibit of acetylcholinesterase activity by phosphorylation of active site, in which could be resulted in damages of germinal cells and reproductive functions. This compound has been used extensively in the agriculture, especially in the northern regions of Iran for pest control. Therefore, in the present study; we investigated OP ability on testis tissue structure in mice.

Materials and Methods: The male mice were divided into four groups. In the experimental groups, mice were injected with single dose of Diazinon and Hinosan (30 and 20 mg/kg ip respectively), sham (corn oil injection) and control

(no injection). Animals were scarified 35 days after the latest OPs injection. Therefore, the mice testis sections were made and morphologic aspects of testis and spermatogenesis processes were assessed.

Results: The OPs showed a significant decrease in number of spermatogenic and Leydig cells. Also blood vessels and also diameter of seminiferus on testes of the mice decreased, but no significant.

Conclusion: Diazinon and Hinosan adverse effects on spermatogenesis. Therefore, application of OPs should be limited to a designed programmed.

Key words: Diazinon, Hinosan, Spermatogenesis, Leydig cells, Seminiferous tubule.

O-93

Multiple testicular biopsies and infertility diagnosis

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Introduction: In this study we compared the results obtained from testicular biopsies regarding histopathological patterns with attention to the number of biopsy sites received for investigation of male infertility.

Materials and Methods: Testicular biopsies of 6317 non-obstructive azoospermic infertile males were examined in the department of histopathology at Royan Institute of Tehran, then the specimens were explored histopathologically, finally obtained results were analyzed statistically.

Results: Considering morphology, the testicular biopsies were categorized into 6 groups: sertoli cell only syndrome (39.9%), maturation arrest (36.3%), tubular hyalinization (12.77%), hypospermatogenesis (10.21%), Mixed Germ cell Aplasia with Focal Spermatogenesis (MGAFS) (6.84%) and mixed germ cell aplasia without spermatogenesis (4%). Subgroup analysis included age, number of biopsy site, unilateral versus bilateral biopsies and morphologic diagnosis. MGAFS diagnosis was found in 9% of the patients underwent more than one sufficient biopsies and in 5.1% of single biopsies. The positive correlation between the presence of mixed germ cell aplasi with focal spermatogenesis and the biopsy number observed by applying qui-square test (p-value < 0.001) while there was no significant relation regarding the unilateral versus bilateral biopsy.

Conclusion: It was significant from the present study that multiple testicular biopsies will raise the

possibility to detect the exact diagnosis especially MGAFS.

Key words: Testis, Multiple biopsies, Male infertility.

O-94

Differences of proteins expression by using 2-DE technique in spermatozoa from adults with varicocele and normozoospermic fertile donors

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Introduction: The aim of this study was to compare the sperm protein expression profile (proteome map) from patients who suffered grade III varicocele with fertile controls.

Materials and Methods: 20 patients and 20 fertile donor sperm samples were characterized using two-dimensional electrophoresis. Differences in protein expression were established using gel analysis software before attempted protein identification.

Results: Gel analysis of the fertile donor proteome maps revealed excellent reproducibility as well as very low intra-donor and inter-donor variability in the presence of protein spots. In patients samples, we have noted consistent differences in protein expression (spots missing, additional spots, less abundant, more abundant) compared with the controls.

Conclusion: In conclusion proteome variation between different fertile donors was very low. In contrast, patients' proteome exhibited differences compared with controls, which we believe is an underestimate. These proteins merit further investigation to predict whether varicocelectomy may improve their expression.

Key words: Proteome map, Varicocele, Fertility.

O-95

Seasonal variations in a regular environment affect sperm parameters

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Introduction: Seasonal changes are an influencing factor which affects Spermatogenesis in mammals

including human. Some studies from different regions in the globe have reported different effects of seasons on sperm parameters. We aimed to study the impact of seasonal variations on sperm parameters in a region with regular seasons; Southeast of Iran.

Materials and Methods: Data were obtained from the protocols of the patients referring to a University based infertility clinic. Data were analyzed by SPSS 15 for Windows retrospectively according to the season. Following parameters were evaluated in different seasons: Semen liquefaction time, pH and volume as well as sperm count, vitality, motility, morphology, the number of round cells and WBC according to WHO guidelines.

Results: one thousand three hundred and fifty protocols were included in this study. 249 (18/2%), 349 (25/3%), 365 (26/9%), and 400 (29/6%) as referred in spring, summer, fall and winter respectively. In subjects with normal sperm parameters there were no significant difference in sperm parameters. However, a non significant increase was detected in sperm count and semen volume at fall compared to the other seasons. In addition, the number of round cells and WBC increased in the winter compared with the other seasons. In subjects with abnormal sperm parameters the semen volume, total sperm count, motility and morphology was significantly higher in winter than other seasons. Semen liquefaction time and sperm vitality was also significantly higher in summer.

Conclusion: We conclude that seasonal variations affect sperm parameters especially in patients with abnormal sperm parameters.

Key words: Seasonal changes, Spermatogenesis, Southeast of Iran.

O-96

Elimination of Fas+ PI- sperm via complement mediated lysis

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Introduction: Apoptosis appears to have an essential role in the control of testis germ cell number and Fas-mediated apoptotic pathway has been implicated in controlling apoptosis during spermatogenesis in a number of mammalian species. The apoptotic marker, Fas, was detected in ejaculated sperm, with a higher incidence of Fas

positivity in infertile men. In this study each sample was analyzed for expression of Fas by flowcytometry. Sperm shows Fas positive but PI negative (early apoptotic), Lysis was activated by antibody-antigen complexes via Fas receptor and Complement.

Materials and Methods: Semen samples were obtained from 73 patients referring to Isfahan Fertility and Infertility Center. Each sample after semen processing was divided into three groups; Control, DGC and Fas-Complement. To complement mediated lysis, each sample was treated with CD95 mAb and then the cells were incubated with Rabbit complement. To demonstrate the effect of complement-activating, and the degree of cell lysis, PI was used.

Results: Fas expressions of sperm in subfertile individuals were much lower and with a mean of 4.1%. No significant difference in percentage PI was detected before and after activation of classical pathway ($p=0.53$) and the expression of Fas before and after DGC wasn't significant ($p=0.408$).

Conclusion: The results of this study show complement could not induce cell lysis in sperm. So the Fas receptor, if present, might be either non-functional or non-operative in ejaculated sperm.

Key words: Apoptosis, Fas, Ejaculated sperm.

O-97

Protamine deficiency as a cause or effect of decreased semen quality

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Introduction: Sperm chromatin is a highly organized structure constituting of DNA and heterogeneous nucleoproteins including histones and Protamines. Protamines make a higher compaction in chromatin of sperm than that found in somatic cells. Sperm chromatin packaging anomalies are associated with poor fertility outcomes. Furthermore, human sperm protamine deficiency correlates significantly with diminished sperm functional ability. Recently, protamine deficiency is evaluated by staining with chromomycin A3. Nevertheless, threshold for protamine deficiency affecting semen quality has been not reported up to now. Therefore, the objective of this study was to determine threshold

for protamine deficiency that affects semen parameters.

Materials and Methods: Semen samples from 150 oligoasthenoteratospermic (OAT, case group) and 180 normospermic men (control group) were collected from infertile couples attending to Avicenna infertility clinic, affiliated to Avicenna Research Institute (ARI). Semen analysis was performed according to WHO criteria. Washed sperms (with PBS) of samples were spread on slides and after fixation were stained with Fluorochrome CMA3. Stained sperms (bright green-yellow cells as protamine deficient) were counted using fluorescent microscopy.

Results: Protamine deficiency as a percent of CMA3 positive sperm in OAT group was significantly higher than normospermic group ($43.67 \pm 17.20\%$ against $24.71 \pm 13.08\%$, $p < 0.001$). Also increased in percent of CMA3 positive sperm had a negative correlation with semen parameters including sperm concentration, motility and morphology ($R = -0.425, -0.393, -0.461$ respectively, $p < 0.001$). In addition considering of the mean percent of CMA3 positive sperm in each groups, ideal cut-off value for CMA3 positive sperm was 35% that have 62.9% and 80.3% sensitivity and specificity. According to 35% and several else cut-off (25, 30, 40, 45 and 50%) semen parameters in protamine deficient men were significantly decreased in comparison to men with normal sperm protamination ($p < 0.001$).

Conclusion: According to CMA3 staining of sperm, protamine deficiency could be the cause or effect of low quality sperm parameters. But in OAT group with a wide range of sperm protamination it is obvious that concentration, motility and normal morphology of sperms decreased significantly in protamine deficient men and this support the role of protamine deficiency as a cause of diminished semen quality.

Key words: Sperm chromatin, Chromomycin A3, Protamine deficiency.

O-98

Identifying environmental risk to male reproductive function by occupational sperm studies

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Introduction: Malfunction of the male reproductive system might be sensitive marker of

environmental hazards, the effects of which may extend beyond reproductive function. The testis is more vulnerable to heat and ionizing radiation than any other organ of the body and severe xenobiotic are known to disrupt spermatogenesis after low level exposure. Studies of environmental impact on human health are often most informative and accurate when carried out in the workplace where exposures can be high and easy to document. Semen analysis provides readily obtainable information on testicular function. The goal of this research is detected the occupational frequency and exposures of men which had abnormal semen analysis.

Materials and Methods: This clinical study was performed on 41 infertile couples that referred to Pymanieh Hospital and Dr. Hooshmand's laboratory during six months. The patients had two semen analysis at least. We were prepared questionnaires for patients which was registered last parameter of semen analysis, job, and occupational contacts. The patients were inserted in different groups due to exposure or no exposure to materials. 12 (29.2%) patients from 41 patients were contacted to effective factors on spermatogenesis include: 3 men (7.3%) impact to heat (driver), 7 men (19%) impact to chemical materials (welder, agriculturist with impact to poison), 2 men (4.9%) impact to soluble (painter of car and construction).

Results: Abnormal semen analysis were detected in occupational groups include: welder, painter's construction, farmer, painter's car with contacted to effective factors on spermatogenesis. The most disorders of semen analysis were in motility and the next, functional sperm disorders.

Conclusion: we can consider the occupational factors in infertile men which far from the environmental hazards will be generally decreased the rate of infertility. Therefore, it may be prevented of semen disorders with avoiding to exposure of toxic materials before medical treatment.

Key words: Occupational factors, Infertility, Sperm counts, Semen quality.

O-99

Impacts of MTHFR polymorphism on the effects of folic acid and zinc sulfate supplementations in OAT men

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Introduction: Folate has many roles in the body and is necessary for cell proliferation such as gametogenesis. Zinc as a cofactor for more than 80 metalloenzymes is necessary in several aspects of male fertility. Methylenetetrahydrofolate reductase (MTHFR) is one of the key enzymes in the folate metabolism and DNA synthesis pathway. A common polymorphism of MTHFR gene is C677T. The aim of this study was to evaluate the MTHFR-dependent response of sperm parameters after folic acid and/or zinc sulfate intervention in infertile men with oligoasthenoteratozoospermia (OAT).

Materials and Methods: 63 men with OAT, who attended to Avicenna Infertility Clinic (AIC), Tehran, Iran, participated in a 16-week double blind randomized clinical study consisting of a daily supplementation of folic acid (5 mg/day) and zinc sulphate (220 mg/day), or placebo in four groups. Before and after treatment, semen and blood samples were obtained for determinations of sperm concentration, motility, and morphology according to WHO guidelines and also chromatin integrity; semen and blood folate and vitamin B₁₂ (RIA method); and zinc (atomic absorption) concentrations. C677T MTHFR genotypes were determined by PCR-RFLP method. The results before and after of supplementations were compared in four groups.

Results: The prevalence of wild-type, heterozygote and homozygote genotypes for C677T MTHFR in all of groups were 60.3%, 31.7%, and 7.9% respectively. In wild-types group, after intervention, sperm concentration significantly increased in subfertile males receiving folic acid in combination with placebo (12.9±5.1 before and 21.8±15.7 after sperm count).

Conclusion: In contrast to heterozygote and homozygote genotype of C677T MTHFR polymorphism, sperm concentration in wild-types significantly improved after folic acid and zinc sulfate supplementations. The increased sperm concentration following folic acid supplementation confirms the role of MTHFR enzyme and folic acid effects on spermatogenesis.

Key words: Folic acid, Zinc sulfate, MTHFR polymorphism, Semen parameters, Oligoasthenoteratozoospermia.

O-100

Intraobserver error in physical examination of varicocele

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Introduction: Varicocele is an abnormal tortuosity and dilatation of the pampiniform venous plexus. Varicocele may occasionally cause infertility. Physical examination of scrotum is the main stay of diagnosing varicocele. The issue of interobserver and intraobserver expertise and accuracy in a physical examination in diagnosing varicoceles is a fact that often is overlooked.

Materials and Methods: Among men who were referred to urology clinic for infertility workup or scrotal pain, 113 men who had varicocele in their first physical examination enrolled in this study for a second examination. All patients were examined by one senior urologist. The evaluation performed in the supine and then the upright position in a warm room.

Results: The mean age of patients were 33.4 years (between 17 and 41 years). 16 patients (14.16 %) came due to scrotal pain and 97 patients (85.84 %) came due to infertility. Among infertile men, 58 patients (59.79%) had primary infertility and 41 patients (42.27 %) had secondary infertility. In initial physical examination; in 91 (80.53%) patients, varicocele was in left side and in 22 (19.46%) patients had bilateral varicocele.

In second examination, changes in grade of varicocele were seen in 19 of 113 patients (16.81%). In 10 (52.63%) patients, the grade was decreased and in 19 patients (47.36 %) the grade increased.

Conclusion: Physical examination of scrotum for detection of varicocele even in the hand of an experienced urologist is subject to overdiagnosis and underdiagnosis. Clearly, standardization of examination and imaging techniques is needed to decrease, if not eliminate, observer variability.

Effects on spermatogenesis,

Key words: Varicocele, Physical examination, Diagnosing.

O-101

The effect of leukocytospermia on semen parameters and sperm fertility in spinal cord injured men (SCI) and pregnancy outcome by intra cytoplasmic sperm injection (ICSI) procedure

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Introduction: Approximately 2000 men suffer from spinal cord injury annually. Most of them want to have children of their own but have problems such as low sperm quality, recurrent genitourinary infection and inability to insemination. This study was conducted to evaluate the effect of hyperleukocytosis in semen on sperm parameters, maturity, and fertility ability in SCI men. The pregnancy outcome by ICSI in their wives was studied as well.

Materials and Methods: We studied 45 spinal cord injured men who presented to our center for using assisted reproductive techniques. Among these, 37 had leukocytospermia and 8 had normal leukocyte count in their semen. Their semen was retrieved by electro ejaculation (EE). We also studied 30 infertile non SCI men as the control group out of which, 14 men had leukocytospermia and 16 had normal leukocyte count in their semen. We studied the effect of leukocytospermia on the semen and sperm parameters, the nucleus chromatins, anti sperm antibodies and finally the rate of fertility with ICSI.

Results: Hyper leukocytosis led to reduction in sperms motility, vitality, normal morphology and maturity. There was not any significant correlation between hypo and hyper leukocytosis and pregnancy rate ($p>0.05$) in our four studied groups by ICSI. Therefore ICSI has overcome the effect of leukocytospermia.

Conclusion: The results showed that there is no need to treat leukocytospermia and semen infection before using ICSI. Therefore we can save money and time which is usually spent on specific treatment of leukocytospermia and obtain negative culture in infertile patients undergoing ICSI. We can limit the side effects of antibiotic therapy as well.

Key words: Leukocytospermia, Semen, Spinal cord injury.

O-102

The assessment of the relationship between body mass index and semen quality and sex hormones among infertile men at Mirza-koochak-khan infertility center

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Introduction: With regard to the effect of weight gain in decreasing fertility in women and the reports in case of decrease of fertility in men with increasing weight we decided to investigate the relation of body mass index with semen index and sex hormones.

Materials and Methods: Clinical examinations and BMI calculation by measuring weight, height, semen analysis, and blood serology were done for all patients referring to Mirza-koochak-khan Infertility Center from 30/9/1387 to 1/2/1388. We grouped 180 men based upon calculated BMI values (normal; 19 to 24 kg/m², over weight; 24 to 29 kg/m², obese; >29 kg/m²). Exclusion criteria were azoospermia, diabetes and thyroid disorders.

Results: In this assessment age did not make any significant difference among the three groups. Body mass index was negatively correlated with volume and total sperm count. The mean of sperm count was significant in ANOVA test between three groups. total sperms count was significantly more in group with BMI 19-24 compared to men with BMI 24-29 (p=0.0001) and those with BMI more than 29 (p=0.01). There was no statistical difference in sperm calculation in men with BMI 24 to 29 compared to men with BMI more than 29.

Conclusion: With regard to these results we concluded that body mass index more than 29 had reverse relation with sperm count. Regarding the fact obesity not only in theatrical aspect but also in practical changes fertility. therefore we suggest to decrease weight and prescribe a diet are important in men with low fertility.

Key words: BMI, Azoospermia, Semen index, Blood serology, Hormone assessment.

4-Midwifry

O-103

Patient counseling about infertility

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Infertility affects a person's functioning in the biological, psychological and social aspects of life. Treatments and procedures are additional stimulus affecting the infertile couples. They experience helplessness, powerlessness, loss of control, desperation. They may begin to isolate more from friends and family as they become more absorbed in their pain, or to avoid being around pregnant women. It is easy for the partner with the medical

issue to become absorbed in guilt and self-blame. Sex becomes a calendar-regulated chore rather than a joyous celebration of union. Medical procedures are invasive and humiliating. Both Infertility and reactions to infertility necessitates us as health care providers to provide counseling to such clients.

The goal of counseling is to help couples improve fertility, where possible, and to expedite further evaluation and treatment. Educating the patients on infertility and its prevention, gathering pertinent historical information to establish a diagnosis, offering information on diagnosis-dependent treatment alternatives, providing a resource for reassurance, counseling, and emotional support, including referral as needed are the starting points in the counseling process. Furthermore patients should be educated about the causes of infertility and the factors that may be within their control to improve their chances of conceiving.

For many couples, infertility has significant emotional and psychosocial components that must not be overlooked in providing a complete range of services to meet patients' needs. Serving as a resource for reassurance, counseling, and emotional stability, including referral to attend in support groups and or advocacy organizations as needed, is an important component of the services they need.

However each person /couples should be seen as unique individuals who need special attention, care, education and counseling. They are faced by many problems during the process of diagnosis and treatment. They has to make different decisions and they need both supportive and therapeutic counseling. Therefore the counselor should be competent in meeting the different needs identified.

Key words: Patient counseling, Infertility, Education.

O-104

Involving men in educational and counseling programs addressing infertility

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Introduction: Men play key roles in reproductive health—as individuals, family members, community decision-makers, and national leaders. Most reproductive health care, however, focuses on women. In another word, despite their pronounced role in reproductive health decision-

making, men are often not included in education, counseling, and services. The objectives of this paper are to analyze men roles and their participation in programs addressing infertility in couples, and to identify ways to reach men and increase their participation.

Materials and Methods: An internet-based literature search of online databases including Medline was conducted. The search was based on a series of search terms and topics suggested by the substantial literature around men's involvement or participation in reproductive health and infertility programs.

Results: Most of the literatures found were focused on men's participation in reproductive health, in general. There was, however, a few numbers of papers which had discussed men's involvement in programs addressing infertility specifically. A number of key findings include: Men have many important roles influencing not only their health but of their partners and family; they are powerful decision-makers; yet, research into male reproductive behaviors has largely been neglected because reproductive issues such as infertility have been perceived as female related. Similarly, reproductive health services have been defined around women's health needs; moreover, behavioral studies of fertility, infertility, and contraceptive use have focused largely on women. In fact, men do have distinct needs for counseling and services. Excluding men from information, counseling, and services is to ignore the important role men's behavior and attitudes may play in couples' reproductive health choices. There is a strong need to identify and overcome Obstacles to Men's Participation in reproductive health and specifically in programs addressing infertility.

Conclusion: The failure to incorporate men in reproductive health promotion, prevention, and care programs may have a serious impact on their health, the health of women, and the success of the programs themselves.

Key words: Reproductive health, Infertility, Men's participation, Involvement.

O-105

Sexual experience of menopausal women: a qualitative Study

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Introduction: The meaning of menopause is embedded in culture and the context women experience this phenomenon. Sexuality is one of the concerns in these women's lives. Women's understandings of this phenomenon largely affect self-caring. In this paper we aim to explore the experience of menopause among women living in Tehran.

Materials and Methods: In this qualitative study we employed phenomenological approach. We purposely selected 14 women who normally had absence of menstruation for at least one year. We found these women in public parks. They were voluntarily interviewed for 60-90 mins. Van Mannen technique was used to analyze the data.

Results: In the field of sexuality we found a major theme: "sexuality ups and downs". Women experienced unstable sexual lives by a number of subthemes: "reluctant to disclosure"; "low sexual desire"; "marital breaking down"; "ended femininity".

Conclusion: Our findings suggest overall unhappiness in these women's sexual lives. Feeling of wrecked femininity with menopause leads these women to undermine their sexuality. They experienced obligation to conduct sexual behaviors with their partners to keep their marital lives intact. According to the findings we suggest some practical approaches to women in the age of menopause: community awareness; gender sensitive health programs for aged women; self-caring education in the period of menopause; and further interpretive research in the subject.

Key words: Menopause, Experiences, Sexuality, Qualitative study.

O-106

The midwives role in infertility treatments (ART)

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Infertility, for couples, is a life crisis.. As treatment begins, couples can experience cycles of hope and despair with each passing menstrual cycle. As the duration of treatment lengthens, psychological distress is likely to increase. In some cases, patients might become obsessed with their infertility, "making a career out of pursuit of pregnancy." This obsession is detrimental to other aspects of their lives, from which marital and sexual problems frequently result. Infertility

treatment is a team work duty that doctors, embryologists, midwives and psychologist should work closely. Midwives, in ART are to perform a part as privileged interlocutor to the patients, co-ordinator of different activities, in providing information to the patients, scheduled preparatory sessions for IVF, elaboration of activity data, follow up of pregnancies and children. The midwife's role includes offering pre-conceptual advice to prospective parents, for example, nutrition, lifestyle or screening choices. In general terms, knowledge of what is involved in fertility treatments may be useful during discussions with clients. Midwives should also be aware of how fertility treatments might affect a pregnancy, both physically and psychologically. For example, pregnancy, and the prospect of parenthood, is obviously joyful for previously infertile couples, the quality of parenting and the psychological development of children in families created by IVF and donor insemination in comparison with natural conception.

In the UK and France there are excellent results obtained through the development of clinical midwives specialist's role in fertility, confidently this role can be useful as well as positive. In this article some of the issues around assisted fertility treatments and their importance to society at large will be discussed.

Key words: Infertility, Midwives role, Counseling.

O-107

Sexuality and infertility

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Reproduction is an important aspect of human being in societies and lack of it adversely affects people's sexual behavior, interaction and experiences. In some contexts childbearing is considered as an outcome of a couple's sexual relationship that predicts future of their marriage. Childbearing is the evidence of a good and successful sexual encounter. Infertility is recognized as stressor of couples' relationships. For instance, societal and parents' force on propagating a procreative marriage as well as having the family's name maintained impose a great mental pressure on an infertile couple.

Sexuality of infertile people is concerned in ART clinics. Infertility specialists report a strong association between infertility and sexual

dysfunctions. Sexual life of an infertile couple goes on a faulty loop: it declines sexual activities; and also this decrease extends infertility years.

Sexual dysfunctions often cause infertility initially such as unconsummated marriage. According to the research 5% of infertile couples had some forms of dysfunctions in their histories; or infertility itself creates sexual dysfunction. Sexual problems appear from the start of investigation for infertility and continue even after the treatment. In investigation period it creates sexual problem when intimate relationship of a couple is publicized and regulated. In diagnosis time couple may lose their confidence in achieving a fruitful relationship, ruined self concept, body image and self-worth and in the treatment phase sexual relationship is disrupted and it turns to an activity with functional aim rather than sexual pleasure.

In this session we discuss sexuality matters related to infertility from: 1) biology; 2) socio-culture perspectives. In biology two forms of sexual dysfunctions are more concerned: a) Retrograde ejaculation or dry orgasm; b) access of sperm to vagina – a vast number of couples use various methods in their sexual encounters and assume them normal, while these methods are not accurate to reproduction.

Socio-cultural context in which people experience infertility plays important role in creating sexual problems. In those societies where culture scripts couples' sexual lives, a proper woman is one who fall pregnant straight after marriage and give the family a child. Unplanned conceiving even in the wed night is propagating a woman as a "very fast productive" bride. In turn a real and healthy man is one who shows off his fertility power; lack of this power in making his wife pregnant would make him socially vulnerable. In those societies, where a man is the centre of power and main decision maker, suddenly is criticized for his weakness. Culturally in these contexts men are sexually initiator and silence is sign of a sexually inexperienced woman's and her dignity / honor. In a planned intercourse women with ovulation problems must demand for sex which will put them in a very difficult situation. Another example is anxiety of an azospermic man that cause the secondary premature ejaculation resulting in an anorgasmic wife. In such cultures process of infertility treatment amplified sexual problems.

Therefore, professional counseling and evidence based integration of sexuality matters into the infertility clinics seems seminal. One of the counseling goals is to help couples differentiate reproduction from sexual relationship so that it

becomes a valuable, pleasurable and affectionate relationship amongst couples. In the process of investigation and treatment the couple is sometimes commenced to change their treatment plan or alter time and the place of their sexual encounters to lessen sexual anxiety. Some of the couples are suggested to see a sex therapist before going on investigation or treatment procedures.

Key words: *Reproduction, Sexuality, Marriage, Infertility.*

O-108

Sexually transmitted infections and infertility

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Sexually transmitted infections (STIs) are the primary preventable causes of infertility. Every year at least 11 million new cases of curable STIs and half of all new HIV infections occur among young people, according to recent studies. STIs affect human fertility primarily through infections of the female upper genital tract and, less frequently, through obstructions of the male vas deferens. Chlamydia infection and gonorrhea are two STIs most clearly associated with infertility. An estimated 2.8 million Cases of chlamydia and 718,000 cases of gonorrhea occur annually in the United States. Untreated, up to 40% of women with Chlamydia or gonorrhea will develop pelvic inflammatory disease (PID). PID can lead to infertility and potentially fatal tubal (ectopic) pregnancy. Preventing STIs – related tubal infertility can occur at two levels. Men and women can achieve primary prevention to block acquisition of infection by delaying initiation of sexual intercourse. Secondary prevention, intended to block progression of lower genital tract infection to the upper genital tract, emphasizes STIs Screening, partner notification, and treatment. According to a recent epidemiological study in Human Reproduction, one in six couples around the world has experienced difficulties at some point in their reproductive lives. Frequencies vary from country to country. For example, STIs-related in fertility occurs three times more often in Africa than in other parts of the world, while one in ten U.S. couples are affected. But what all countries have in common is the dual rise in infertility due to delayed childbearing and, significantly, STIs. Differences in religion, culture, and ethnic history affect sexual behavior and how we teach reproductive health, but not the reasons why. Protecting reproductive fertility is critical to all

societies. The Global strategy for the prevention and control of sexually transmitted infections 2006-2015 has two components: technical and advocacy.

Key words: *Sexually transmitted infections, Infertility.*

O-109

Socio-cultural aspects of infertility

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Introduction: Infertility is medically defined as a lack of conception following at least one year of unprotected sexual intercourse (WHO, 2009). Infertility can cause considerable social, cultural, emotional and psychological consequences. Although this condition affect many couples around the world; however, it is still a topic that is not widely discussed or for which help is easily accessible.

Review: It is estimated that worldwide between 70 and 80 million couples suffer from infertility, most of these are residents of developing countries. There is a high prevalence (10% -15%) of infertility in these countries but in Iran, reports shows that a higher prevalence rate.

The causes are higher age of marriage, post-partum infection, unsafe abortion, iatrogenic tubal and pelvic infertility, tuberculosis, air pollution, high incidence of male factors related infertility and etc.

While a deeply private, often hidden, experience, fertility is intrinsically linked with our social identity. Parenthood is perceived in most cultures as a central developmental milestone towards adulthood. Infertility, therefore, can cause a major disruption in people's lives because it interferes with the established and desired life period. There is gender suffering in infertility in many countries. While the devastating effects of infertility are felt by both women and men, the evidence points to a much more negative effect on women's lives. Compared with men, women in infertile couples have lower self-esteem, are more depressed, report lower life-satisfaction, are more likely to blame themselves for their infertility, and are more likely to regard childlessness as being unacceptable. They also experience more social consequences and feel a higher level of stigma. It is argued that the solution to the problem of infertility is its prevention. Prevention and treatment of infertility are of particular significance in our region because of woman' social status, her dignity and self-

esteem are closely related to her ability to have children. Maternal age is considered the most important determinant of conception, and much attention has been dedicated in the public arena to the increasing age of first time mothers. Financial concerns also play a part in this matter, with couples wishing to feel secure in their employment and housing arrangements before embarking on parenthood. One of the important things in this regard is religious aspect to acceptance of "Assisted Reproductive Technology" (ART) as a line of treatment of infertility. Furthermore, adoption as a possible solution to the problem of infertility is not widely acceptable for various cultural and religious reasons. The issue of access to infertility treatments is an important point worldwide. It is well recognized that infertility treatment comes at considerable financial cost. A mechanism had to be found to provide low-cost ART and better insurance coverage to the needy.

Conclusion: Social, cultural and religious aspects influence infertility in medical, ethical, social behaviors, practices and policy making.

Two key issues are considerable:

- Information and Support: An increase in public awareness and information is crucial in order for couples to feel supported during their difficulties.
- Prevention: Considering the widespread nature of fertility problems, it is essential to disseminate information on the main known causes of fertility problems and any preventative measures in relation to them. More relevant is the issue of how social and cultural pressures might also affect people's reproductive capacity.

This paper aims to provide an overview of the range of socio-cultural aspects that couples affected by fertility problems often encounter.

Key words: Infertility, Socio-cultural, ART.

O-110

Comparison of psychological aspects of infertility and anxiety levels in infertile couples

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Introduction: World Health Organization (WHO) considered infertility as a major reproductive health problem. But the severity of anxiety created by this phenomenon, depending on gender, ethnic, cultures, beliefs and characteristics and individual differences.

Materials and Methods: In this study 44 patients referred to the Infertility Center of Rasht were tested for anxiety by SCL-90 test. In addition a questionnaire including age, occupation and education of infertile person and his wife have been filled. Some anxiety syndrome, such as clinical depression, compulsive, interpersonal sensitivity, aggression, and mental parish were evaluated.

Results: Our findings indicate that anxiety in infertile men were significantly less than the women (though the anxiety level is high in both groups). Results indicate that 13.5% of men and women referred to infertility center suffered mild to moderate depression and 24.25% of them moderate to severe depression.

Conclusion: Infertility is a common problem and anxiety is one of its consequences. Therefore alongside infertile infertility treatment, they also have to receive psychology counseling.

Key words: Infertility, Anxiety, Psychology.

O-111

Infertile couples silence voice: A phenomenological study

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Introduction: Reproduction is valuable in many cultures and having a child is one of the most basic human motives. If couples failed in became pregnant, it can be a destructive emotional experience. According to WHO report, infertility affected men and women in reproduction age and encounters suffered people in many emotional and psychological problems. Assistance reproductive technology's physical, psychiatric and financial challenge affected couples too. Attempt for being pregnant makes boring and expensive medical efforts and doubt and insolvency associated with infertility can threat couple relation. In spite of that different studies have shown importance of physical psychological issues and infertility, different aspect of infertility is ambiguous. The aim of the study was to understand and gain deeper insight in to infertile couple's lived experience during infertility period.

Materials and Methods: Eleven infertile couples were interviewed about their experience during infertility. The researchers analyzed the verbatim transcripts using Colaizzi's phenomenological approach.

Results: Six themes emerged eleven sub themes expanded and clarified the meaning of these themes. Result revealed that infertility is deeply affected couple's emotional and sexual relationship. Couple's relationship with relative destroys due to infertility. Also, couple's expectation from the health care providers are not perform and at the end they resorting to informal medicine.

Conclusion: The meaning of these themes shows that infertility has a deep affection on infertile couple's life and while planning the treatment clinicians should give more attention to the infertile couple's needs. It seems that extensive use of psychological services for infertile couples in infertility centers could help these couples.

Key words: Infertility, Live experience, Phenomenology, Kolizy method, Qualitative study.

O-112

Intimate partner violence prevalence in patients attending Shiraz Medical School affiliated clinics in 2008

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Introduction: Violence against women is a serious problem in world. Violence against women can be seen in all countries. The objective of this research is to find out the frequency and risk factors of intimate partner violence (IPV) in Shiraz.

Materials and Methods: In a cross-sectional survey, 800 women, 17-70 years old, attending three obstetric and gynecologic clinics affiliated to Shiraz University of Medical Sciences in Tehran were invited to participate to fill in a valid, reliable self-administered questionnaire. We assessed the association between IPV and different demographical factors such as age of wife and husband education level, being employed or unemployed, having children, physical and psychological diseases, infertility, mean marriage duration, using drugs.

Results: 560 women completed the questionnaire (respondent rate was 70%). 230 (36.3%) experienced at least one type of violence during last month. 169 persons (30.1%) experienced oral violence, 102 persons (118.2%) experienced social violence, 114 persons (20.4%) experienced physical violence and 74 persons (13.2%) experienced sexual violence. 230 persons (41.1%) acclaimed that have encountered at least one type of IPV during all their life. Low level of education

in women and their spouse, coercive marriage for women psychological and physical disorders in men, using alcohol and drugs, low income and men's infertility are the main causes of violence against women increased risk of IPV.

Conclusion: High prevalence of IPV in our area, necessitate efforts to develop and evaluate interventions in this issue.

Key words: Intimate partner violence, Risk factors, Shiraz, Iran.

O-113

Acceptability of a preconception sex selection program as a method for reduction of family size in an urban area in Iran

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Introduction: Cultural context and son preferences in some urban and rural areas of Iran have led to a large family size.

Materials and Methods: In a prenatal clinic, a program of preconception sex selection was offered to 80 volunteer couple who had at least 1 child and wished to have more children and a question asked about consent for an elective surgical sterility after birth of desired sex baby. Through three sex selection methods, 75% of subjects selected first program, 20% selected an Intra uterine insemination and other chose an IVF program. 71.6 % of subjects in group1 (including ovulation kit+ diet) and 75% of subjects in IUI and IVF groups, preferred a boy as their next child. In question about an elective surgical sterility or a wish for more children, 78% in group 1 and, 81.2% and 75% of subjects in IUI and IVF group did not have a wish for more offspring. Female subject's level of education, were significantly correlated with desired sex for next child ($p < 0.05$).

Results: It revealed that given a choice for contribution in a program of sex selection for couples, can be effective in decision making of couples about the size of family in Iranian urban areas.

Key words: Acceptability, Sex selection, Family size, In vitro fertilization, Intra uterine insemination.

O-114

Assessment of general health among infertile women referred to Larestan gynecological clinics in 2009

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Introduction: Respect to psychological needs and health of infertility women is too important. Because of some stressor factors and impact of circumstances, these groups are at high risk. It seems that general health (GH) and psychological status of infertility women is related to some factors especially couples struggling to conceive a baby. The purpose of this study is assessment of GH among infertility women referred with Larestan gynecological clinics for infertility treatment.

Materials and Methods: This descriptive study carried out on 50 infertility women (15 – 35 years old age) referred with Larestan gynecological clinics in 2009. Instruments for data collection were GHQ-28 and demographic variables form. The cutoff point of total score was set as 28 and in each item was set as 6. The data were analyzed by SPSS version 13.

Results: The average age of all participants was 26±4.2 years. The percentage of women with primary school education was the highest. The result of this study showed that 27.9% of infertility women are suspended to physical or psychological disorders. These disorders were highlighted in anxiety item.

Conclusion: Suitable planning toward using psychological health education and also consulting with infertility women specifically approach to reducing anxiety among these women is necessary.

Key words: Infertility, General health, Counseling.

O-115

Effect of acupuncture on infertile women: Case report

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Introduction: Using of acupuncture in infertility has a history since 3000 years ago. Later applying this method on infertile men and women was successful. It was paid a high attention on acupuncture to put in progress as an effective treatment and used all over the world. This report is related on two patients who had several years' history of infertility and they were treated by electrical acupuncture and moxibustion.

Materials and Methods: The first case was a 31 years old woman with 8 years history of infertility, and had a pregnancy without embryo which at last encountered to curettage. She had 2 times Intra Uterine Insemination (IUI) without pregnancy and clinical check up with laparoscopy showed that she had endometriosis. The patient treated by electro acupuncture and moxibustion for 3 month before In Vitro Fertilization (IVF) cycle. The second patient was a 37 years old woman with 16 years history of infertility and Polycystic Ovarian Syndrome (PCOS). She had three unsuccessful IUI and one IVF cycle which had Ovarian Hyperstimulation Syndrome (OHSS) and so the result was unsuccessful too. This patient had 3 month acupuncture before IVF cycle.

Results and conclusion: In the first patient before IVF cycle, the β human chorionic gonadotropin (β -HCG) test was positive. Later on ultrasound showed a pregnancy sac with 8 weeks fetus. The second patient after IVF cycle had 21 oocytes and 14 embryos which 4 embryos were transferred. Ongoing twin pregnancy with fetal heartbeat was confirmed by the ultrasound in 7th week. A subsequent scan at 20th week gestation confirmed viability of both fetuses.

Key words: Female infertility, Acupuncture, IVF, PCOS.

O-116

Investigation the view-points and awareness of couples visiting Alzahra Health Care Education Center regarding the problems caused by infertility

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Introduction: Stress causing by infertility coincide with psychological problems among infertile couples. Intensification parameters of this painful experience are failure cure- poor economical condition, poor culture and so on. Thus considering to the problems of infertile and setting up a good reproduction hygiene policy is very important.

Materials and Methods: This investigation was a descriptive study on 200 visitors (equal number of both sex) choose randomly from patients came to Infertility Clinic of Alzahra Educational and Therapy Center. They were asked to fill up the questionnaire.

Results: Negative effect of infertility in emotional, sexual and social affairs was among women 44%,

39% and 85% and among men 26%, 19% and 35% respectively.

The last decision in the case of treatment failure: continuing the life without any children; 66% of women and 84% of men, adopting step child; 19% of women and 3% of men, accepting embryo donation; 36% of women and 6% of men, accepting egg donation; 9% of women and 16% of men.

Conclusion: Women spiritually are much more under the pressure than men. Negative effect of infertility in different cases cause depression and has lots of problems in couples' life. The presence of psychologists and psychiatrists at infertility health centers could reduce pressures of infertility.

Key words: Infertility, Depression, Psychology.

O-117

Comparing the previous pregnancy outcome in fertile and infertile women

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Introduction: Although many studies have been shown the association between adverse pregnancy outcomes and future fertility, it is not clear exactly. To compare the previous pregnancy outcome in fertile and infertile women, this study was done.

Materials and Methods: We performed a case-control study on 182 patients 15-45 years old during 6 months. The result of prior pregnancy such as abortion, ectopic pregnancy, postpartum infection, prolonged labor, prolonged rupture of membrane, surgery, placental remove and postpartum curettage was compared to control. Data were analyzed by SPSS (p-value < 0.05 is significant).

Results: 92 infertile and 90 fertile women were studied. Induced abortion and postpartum infection were statistically significant differences between the study and control group. No significant differences were seen in history of spontaneous abortion, ectopic pregnancy, prolonged labor, prolonged rupture of membrane, surgery, removal of placenta and postpartum curettage in both groups.

Conclusion: Data on this study were showed that history of induced abortion and postpartum infection can be effect on future pregnancy.

Key words: Fertility, Infertility, Previous pregnancy outcome.

O-118

Macronutrients consumption and female infertility

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Introduction: Nutritional status is closely related to reproductive function. Few studies have investigated the direct effects of macronutrients on natural reproduction, separately. So it seems necessary to gather results from recent studies about the effects of macronutrients on human fertility.

Materials and Methods: We use all articles about specific dietary factors that affect fertility, since 2000 to 2009, published in Science direct, Pub med and Scopus databases.

Results: The amount and quality of carbohydrate in diet may be important determinants of ovulation in healthy women. Total carbohydrate intake and dietary glycemic load are positively related to ovulatory infertility.

Consuming a low carbohydrate diet lead to significant reductions in fasting and post glucose insulin levels and free testosterone levels. Consumption of protein from animal sources is associated with an increased risk of infertility because of anovulation, whereas consuming protein from vegetable sources appeared to have the opposite effect. High intake of low-fat dairy foods may increase the risk of anovulatory infertility whereas intake of high-fat dairy foods may decrease this risk. Trans unsaturated fats may increase the risk of ovulatory infertility when consumed instead of carbohydrates or unsaturated fats commonly found in nonhydrogenated vegetable oils.

Conclusion: Dietary macronutrient modification and energy restriction may play role in improving reproductive function. However, further studies are needed to draw a final conclusion.

Key words: Dietary, Macronutrient, Reproduction.

O-119

Comparing the attitudes of post-menopause and pre-menopause women toward menopause

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Introduction: Menopause is a critical stage as well as the most important event in middle-aged women. In this period women got involved in so many physical and psychological problems that result in a reduction in their quality of life. The aim of this study was to determine the attitude of post-menopause and pre-menopause women toward menopause.

Materials and Methods: This research is a descriptive study. 52 post-menopause and pre-menopause women were questioned. They were selected using random sampling method. Data were gathered by a questionnaire; compose of demographic characteristics, health history, sign and symptom check list and attitudes questions. The questionnaire was filled in using face-to-face interview.

Results: The mean age at menopause was 47.52 ± 4.87 years (range was 35 to 57 yr). The most common problems reported by the samples included of hot flashes (15.4%), joint and muscle symptoms (11.5%), agitation (9.6%), depression (7.7%), sleep trouble (5.8%), vaginal dryness (5.8%), cardiac trouble (3.8%), sexual problems (1.9%) and urological symptoms (1.9%). Positive attitude in pre-menopause and post-menopause was 32.2% and 58.8% respectively.

Conclusion: The mean age of menopause was lower than Asian and west countries. The prevalence of hot flashes and joint and muscle symptoms was higher than other symptoms. In the pre-menopause women negative attitude toward menopause are more emphasized than the actual experience of menopause. Thus with attention to the impact of menopause on women quality of life and community health, planning of special health care in this period is essential.

Key words: Attitude, Menopause, Women.

O-120

Comparison of anxiety between primigravidas and pregnant women with history of previous fetal or neonatal death

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Introduction: Pregnancy is a normal phase of woman's life, but needs physiological and psychological coping and previous history of fetal or neonatal death can have negative effect on this coping, and may increase anxiety during current pregnancy.

AIM: To comprise anxiety in primigravidas and pregnant women with the history of previous fetal or neonatal death.

Materials and Methods: A two group comparative design and sequential nonrandomized sampling method was used. We collected 120 Iranian healthy pregnant women during their third trimester of planned current pregnancy from 10 health centers in Mashhad (2006-2007). Samples were 20 – 40 years old age pregnant women with a basic education. 40 of samples had previous history of fetal or neonatal death without any living child and 80 of them were primigravidas. The tools, which were used in this study, had two main parts of personal characteristic, and pregnancy outcome questionnaire (POQ of Theut et al. 1988). Descriptive and inferential statistics were used by SPSS.

Results: The highest percentage of both age groups belonged to 20-24. For unity of two groups, Per t test was used for age and pregnancy, X², Fisher exact test for education level, living condition, finance and job. In this study we only found significant difference in 8 of 15 statements of POQ between two groups. The average of anxiety during pregnancy in the pregnant women with history of previous fetal or neonatal death was more than second group. The independent t-test also showed a significant difference between two groups ($p=0.000$).

Conclusion: Due to the increase of anxiety in pregnant women with previous history of fetal or neonatal death, it sounds it is necessary to plan supportive, educational and counseling program for the mentioned high risk group of women. We suggest to continue the same research during the first and second trimester of pregnancy and postpartum in the clients whom will be visited in the other clinics.

Key words: Pregnancy, Anxiety, Fetal death, Neonatal death, Pregnancy outcome questionnaire.

O-121

Masturbation and IUI

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Introduction: Intrauterine insemination is a fertility treatment often selected by couples who have been trying to conceive for at least one year but who have no known reasons for their infertility. It may also be selected as a fertility treatment with any of the following condition: low

sperm count, decreased sperm mobility, requirement of donor sperm, a hostile cervical condition, such as cervical mucus that is too thick, sexual dysfunction. The goal of this research is the effect of masturbation on emotion and sprite of her husband that IUI must be performed.

Materials and Methods: This descriptive research was performed on 23 infertile ladies that referred to Jahrom's Pymanieh Hospital. The IUI procedure was performed if no response to medical and surgical treatments. Patients' characteristics: average age 27 years, the level of educations: 35.3% undergraduate studies. Husbands' characteristics: average age 33 years. We have frequently tried to contact them by telephone for collecting information about husband's emotional status during masturbation. We had 5 questions in our questionnaire that they must be answered as; very much, much, moderate, mild, none, no response. Questions were included: 1- How much your husband feels sin following masturbation? In reply to this question, 23.5% of them were very much, 5.9% much and moderate, 11.8% mild, 52.9% none. 2- How much your husband took pains following masturbation? The responses of 5.9% of them were very much, 11.8% much and moderate, 29.4% mild, and 41.2% none. 3- How much your husband has worried due to masturbation in laboratory or other environment except their houses? 29.4% very much, 5.9% much and unresponsive, 23.5% moderate and none, and 11.8% mild. 4- How much your husband has worried if collecting semen was performed during intercourse? There weren't any response for very much and much, 5.9% moderate and unresponsive, 29.4% mild, and 58.8% none. 5- How much women have worried when her husband was done masturbation? There weren't any response for very much and much and unresponsive, 11.8% moderate, 41.2% mild, and 8% none. Data analysis was done with SPSS. Results: from 23 patients, who IUI were performed, 17 of them were accessible. So the results were: most of them (52.9%) hadn't had any response to feel of sin during masturbation, only 29.4% of men had very much and much response. In reply to painful, 70.6% of men have had mild or none response. Most of men had worried in reply to environmental effects of masturbation (58.8%). Most of women were satisfied for collecting semen with intercourse (49.2%). So, the recent studies are indicated that the environmental option has only the effective role in masturbation.

Conclusion: The result of this research is indicated that the access of male semen due to masturbation

for IUI procedure has not bad emotional effects on infertile couples.

Key words: IUI, Masturbation, Emotional effects, Infertile couples, In the hope of baby.

O-122

Mental health screening of patients referring to Avicenna Infertility Treatment Center by General Health Questionnaire (GHQ- 28)

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Introduction: To screen the mental health status of patients referred to Avicenna Infertility treatment center by GHQ- 28.

Materials and Methods: This is a case series on a random sample of all patients who have been referred to Avicenna Infertility treatment center. After getting patients informed consent, each of them filled questionnaires about their demographic and mental health status using GHQ- 28.

Results: There were 400 couple aged from 21 to 63 years (34 ± 6) infertility based was 21.9% female, 65.5% male, 7.1% Bisexual and 5.4% unexplained. Clinical cut- off point of GHQ- 28 was 24, that 96% of patients has been reported GHQ-28 Score Higher than cut- off point (97.7% male, 94.7% female). In sub scale A (somatization) 90.4%, sub scale B (Anxiety) 89.1%, sub scale C (social dysfunction) 89.1% and subscale D (Depression) 96.8% were Higher than cut- off point. Significant statistical difference in male and female was seen in total GHQ- 28 and subscales A and D.

Conclusion: Infertile patients referred to Avicenna Infertility Treatment center need to psychological support. Physicians and personnel of Infertility center should be attend to patients and psychological demands. High risk patients need to psychiatric and psychological interventions.

Key words: Infertility, General Health Questionnaire, Screening, Anxiety, Depression, Social dysfunction somatization.

O-123

Metabolic effects of obesity on reproduction

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Introduction: Obese women are characterized by similar co morbidities to men, particularly type 2 diabetes mellitus and cardiovascular diseases. Moreover, they also develop some specific problems, including fertility-related disorders and some hormone-dependent forms of cancer.

Materials and Methods: The relationship between excess body fat and reproductive disturbances appears to be stronger for early-onset obesity. Early onset of obesity, particularly during adolescence, favors the development of menses irregularities, chronic oligo-anovulation and infertility in adulthood. Moreover, obesity in women can increase the risk of miscarriage and impair the outcome of assisted reproductive technologies.

Results: The main factor implicated in the association between obesity and fertility-related disorders is insulin excess, which accompanies insulin resistance. Hyperinsulinaemia may be directly responsible for the development of androgen excess, through its effects in reducing sex hormone-binding globulin synthesis and circulating concentrations, and in stimulating ovarian androgen production rates. Androgen excess, in turn, represents one of the major factors leading to altered ovarian physiology and associated ovulatory disturbances.

Conclusion: Obesity-associated hyperleptinaemia may represent an additional factor involved in anovulation, not only through the induction of insulin resistance, but also through a direct impairment of ovarian function.

Key words: Obesity, Reproduction, Hyperleptinaemia.

O-124

Psychosexual disorder and infertility

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Introduction: Sexual behavior is a reflection existence motivation which is vital for the survival of generations, and satisfaction from marital life, and inability in reaching these goals is one of the worst crisis for couples. Infertility is a phenomenon that can effect on sexual activity. This study designed to compare relation between psychosexual disorders and infertility.

Materials and Methods: This research was quantitative and qualitative method, sample size included 100 infertile and fertile couples in two groups (n=50). The research society was selected with random method. Tool was MHQ and Sexual disorders questionnaire, sample experiences were collected via introduction. The data was analyzed by SPSS software using Pearson correlation and Chi-square test.

Results: Finding of this study indicated that infertile women had higher psychological disorders mean score for depression (57%), anxiety (67.2%), there was positive relation between infertility and sexual problems. Introductions analysis was confirmed that infertile women had higher sexual disorders such as: orgasm difficulties and sexual stimulation or satisfaction.

Conclusion: There was strong relation between depression and sexual disorder in infertile women, while this relation among fertile women was weaker than infertile. So, diagnosis and treatment of sexual dysfunction and paying attention to psychiatric disorder is important in improvement of marital life. So, it is suggested that we should plan some psychosexual consultation clinics for infertile couple in order to getting more effective infertility treatment.

Key words: Psychological disorder, Sexual Dysfunction, Infertility.

O-125

The comparative study of marital satisfaction in infertile women and normal women

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Introduction: Infertility is a complex crisis in life, that leads to psychological and emotional stress in couples. Many infertile individuals report feeling defective physically and sexually. Infertility has been associated with anxiety, stress, and sexual problems in both men and women. Many experts cite an association between infertility, sexual dysfunction, and psychological distress. The

purpose of this study was the comparative marital satisfaction in infertile women and normal women.

Materials and Methods: Sample group was composed of 60 women, who were randomly allocated into two groups (30 infertile women and 30 normal women). 30 infertile women who were undergoing ART (Assisted Reproduction Technology) referring to Novin Fertility and Infertility Center in Mashhad. In this study we used DAS questionnaires (Dyadic Adjustment Scale). The data analyzed through independent t-test with SPSS.

Results: The results revealed that there was a significant difference ($\alpha=0/05$) between two groups. The average marital adjustment scores was significantly high in normal women ($p<0/05$).

Conclusion: The findings of research show that women in infertile couples reported poor marital adjustment and quality of life compared with normal women.

Key words: Marital satisfaction, Infertile women, Normal women.

O-126

Status of the quality of life in infertile couples before and after conceive

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Introduction: infertility as a causative factor may influence the quality of life in couples suffering from infertility. Socio-economic status of couples, their belief, and their religious tenets may also alter the quality of life as well. Present study assessed the quality of life in couples attending a University based infertility clinic at the time of admission and after they had successfully conceived.

Materials and Methods: In the present study, couples who signed a written consent underwent an interview for their demographic data and their quality of life through SF-36 questionnaire.

Results: Seventy-two women and 49 men contributed into this study. Among the women, the social functioning showed the highest score (83.3 ± 24.4) and the general health showed the lowest score (64.5 ± 19.8). In men, body pain had the highest score (90.2 ± 14.8) and the general

health had the lowest score (69.5 ± 19.8). Couples who successfully conceived participated in a second interview. Physical functioning, role physical, body pain, social functioning and role emotional improved to the highest score (100) in women, while in men, role emotional, role physical and social functioning improved to the highest score (100). General health was the least parameter changed following pregnancy, both in men and in women. Among the demographic data, the duration of infertility affected the quality of life profoundly.

Conclusion: Infertility has a negative impact on the quality of life in couples; especially in women. However conceiving could strongly adverse negative effects of infertility on the quality of life of infertile couples.

Key words: Infertility, Quality of life, Couple.

O-127

Awareness about infertility factors in young couples referred to pre marriage consultation center of Zahedan in 2007

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Introduction: Infertility is defined as disability to fertilize after one year in a couple that has regular sexual intercourse without contraception. The awareness of couples about definition, diagnosis, etiology, treatment and prognosis of this problem is very important in continuing of their joint life.

Materials and Methods: In this descriptive cross sectional study we surveyed the relation between age, sex, job, habitat, education with level of awareness about infertility related factors in 150 couples that referred to pre consultation center of Zahedan city in 2007. we assemblage data in information forms by interview and in final we analyzed data with SPSS software and p-value <0.05 was considered significant.

Results: This study showed that the relation between age ($p=0.22$), sex ($p=0.96$), job ($p=0.18$), habitat ($p=0.14$) and level of awareness about infertility wasn't significant, but between education and it was significant ($p=0.0001$).

Conclusion: Illiteracy is likewise the important privation in our center and we must effort to naught this problems in our country.

Key words: Awareness, Infertility, Pre marriage, Couple.

O-128

Survey of anxiety in infertile women referred to Larestan gynecological clinics in 2009

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Introduction: It is now well established that couples struggling to conceive a baby or diagnosed with infertility can experience significant anxiety. There is evidence that state and trait anxiety, inhibition of negative emotions, distress and depression levels are associated with lower pregnancy rates. As such, authors were interested in women state and trait anxiety with the demands of fertility treatment.

Materials and Methods: this study is a descriptive design research was carried out in Larestan gynecological clinics in 2009. Population of this study was 50 infertility women (15 – 35 years old age) referred with these centers for infertility treatment. Instruments were State and trait anxiety inventory and demographic variables form. Data were analyzed by use of SPSS 13.

Results: the average age of all participants was 26 ± 4.2 . The percentage of women with primary school was the highest, so the result of this study showed that the mean of state anxiety and trait anxiety scores were 42.26 (SD=13.33), 38.70 (SD=10.75).

Conclusion: According to the results of this study we can concluded that women's anxiety during infertility treatment is high, therefore applying specific approach to reducing anxiety among these women is necessary.

Key words: Infertility, Women, Anxiety.

O-129

Oocytes atresia

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Introduction: Prenatal oogenesis produces hundreds of thousands of oocytes, most of which are discarded through apoptosis before birth. Only a minute fraction of the ovarian follicles present in a fetal ovary will complete the path to ovulation. Most of the follicles will undergo atresia, a hormonally controlled apoptotic process.

Materials and Methods: This is a review article. The latest books and articles searched.

Results: Hormone and growth factor regulation of follicular atresia is stage-specific. Progression to the antral follicle stage is probably the most critical stage of follicle development in vivo, and FSH is a major survival factor at this stage. In addition, insulin-like growth factor I and interleukin 1b are potent survival factors for cultured rat follicles at the antral stage. Estradiol and IGF-I might be involved in controlling apoptosis in granulosa cells during follicular atresia. Some studies have also demonstrated the involvement of tumor suppressors, apoptotic proteins and survival factors. These factors contribute to the developmental decision as to whether the ovarian follicles mature or undergo atresia.

Conclusion: Follicular development, characterized by high rates of proliferation and apoptosis, is a tightly regulated process, which is dependent on a balance between local ovarian growth factors and circulating hormones. However, the diminishing number of follicles in each developmental stage indicates that the control of follicular survival or atresia is not the same at each stage. All follicles are not alike: both the susceptibility to apoptosis and the regulators of follicle survival change during the different stages of development. Increased understanding of the sequential regulatory events of follicle development will aid development of new contraceptives and new methods for increasing the female reproductive lifespan and will lead to improvements in culture methods for oocytes for in vitro fertilization.

Key words: Follicular atresia, Oocyte, Apoptosis, Oogenesis.

O-130

Evaluation of infertile couple's opinion that referred to Infertility Center of Shahid Beheshti Hospital about surrogacy

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Introduction: Infertility is the failure to conceive of a couple after 1 year of marriage without birth controls. Most of infertile couples could have baby by using new methods for infertility treatment. One of the newest methods is surrogacy. The aim of this study is evaluation of infertile couple's opinion about surrogacy for infertility treatment.

Materials and Methods: This is a descriptive analytic study which has been done on 100 infertile

couples who referred to infertility clinic Shahid Beheshti Hospital in autumn 2009. Cases selected by simple sampling and a questionnaire fielded out by all cases. Demographic and general information of cases' opinion about surrogacy were gathered and analyzed by Excell software.

Results: 44% were in both age group 18-29 and 30-39 years old. Only 31% had known surrogacy. The results showed 69% of cases were agreed for this procedure. Also 69% of cases were believed that having baby by using this method is better than adoption. 46% of cases didn't know anything about religion acceptance about this method. 82% believed that psychiatric consulting is necessary for donor and recipient uterine.

Conclusion: Around two third of cases didn't know anything about surrogacy. More than two third of cases were agree with surrogacy for infertile couple treatment. About Islam opinion for doing this procedure, 46% of cases had no information, so informing population for this method of infertility treatment seems necessary. 86% believed that infertility treatment by surrogacy must be secret for all and for baby which has been born by this method too.

Key words: Surrogacy, Infertile couple, Opinion.

O-131

The evaluation of relationship between stress and knowledge of infertility in infertile women

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Introduction: Infertility is one of the major problem during reproductive health period with use of modern's infertility techniques the half of infertile woman will be pregnant. But also infertility is as a great problem in all countries. Psychological dysfunction is one of the factors that can occur disorder in fertility. The purpose of this study was to examine the relationship between stress and knowledge of infertility by infertile women, who were coming to Z.U.H in infertility's center.

Materials and Methods: The number of 100 infertile women who came to infertility center were selected and divided in two groups A and B. Group A didn't have any information about their infertility's factor, but group B understood about their infertility's factor.

Results: The result showed 80% of the group A didn't have any information about their infertility's factors and their score were more than 30 and relationship was significant with their information ($p < 0.0001$) and they need to psychological evaluation. The group B that they understood about infertility factors themselves, the PET score was less than 15 and they didn't need to psychological evaluation.

Conclusion: Psychological dysfunction can be a factor in women's infertility, also having information about infertility's factor can reduce anxiety so we suggest consulting for this group.

Key words: Infertility, Knowledge, Stress, Anxiety.

O-132

Use of fertility drugs and risk of ovarian cancer

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Introduction: One of the best established risk factors for ovarian cancer is parity, with nulliparous women having a higher risk than parous women. Furthermore, an association may also exist between infertility, fertility drugs, and risk of ovarian cancer. In view of the large, constantly growing number of women requesting fertility treatment and the high incidences of ovarian cancer in most Western countries, the question of whether fertility drugs increase the risk of ovarian cancer has received much public attention and resulted in patient anxiety since the late 1970s.

Concern was intensified by the results of three epidemiological studies, which showed increased risks of ovarian cancer among women treated with fertility drugs, particularly nulliparous women and those who had used fertility drugs long term. Several subsequent epidemiological studies were largely reassuring as they did not confirm a strong link between use of fertility drugs and risk of ovarian cancer. Many of these studies, however, had methodological limitations: the cohort studies were of small size, had short and incomplete follow-up, and did not control for potential confounders, and the case-control studies had problems with the validity of reported drug use. Furthermore, most studies were not able to distinguish the possible effects of fertility drugs from the underlying causes of infertility, which

could independently affect the risk of ovarian cancer women. Analyses within cohort showed no overall increased risk of ovarian cancer after any use of gonadotrophins, clomiphene, human chorionic gonadotrophin, or gonadotrophin releasing hormone. Furthermore, no associations were found between all four groups of fertility drugs and number of cycles of use, length of follow-up, or parity.

Key words: Ovarian, Parity, Fertility drugs.

O-133

Integrative medicine for infertility

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Introduction: Integrative medicine brings together treatments from both traditional medicine and alternative or complementary medicine. Evidence exists for the safety and effectiveness of combining both modes of treatment for many conditions, including infertility. Several alternative therapies have been used in conjunction with allopathic infertility treatments, like in vitro fertilization.

Materials and Methods: Acupuncture: Studies have shown that integrative medicine practices, such as acupuncture, can be used to treat infertility in combination with traditional medicine for infertility. The reason for this success might be increased blood flow to the uterus and the ovaries and assistance with handling emotions and stress.

Electro-acupuncture: Data also suggest that electro-acupuncture (acupuncture performed with electronic stimulation) can help women become pregnant by normalizing the secretion of certain reproductive hormones. Supplements: Taking supplements in addition to a healthy diet may also help a woman become pregnant, stay pregnant, and maintain a healthy pregnancy. Yoga and Meditation: Yoga and meditation provide a way to relax, improve your attitude, and help you manage stress. Some women undergoing IVF experience more success with these forms of integrative medicine, maintaining a regular yoga and meditation practice.

Results: It is important to note that, while good nutrition and alternative therapies may benefit a couple trying to conceive, they should not stop their allopathic medicine regimen. Alternative therapies have been shown to be most effective when they are used in conjunction with allopathic methods, like in vitro fertilization. It is additionally

best to make nutrition and supplement changes under the supervision of an experienced fertility practitioner.

Conclusion: These therapies are not widely taught in medical schools, are generally not used in hospitals, and usually are not reimbursed by medical insurance companies, though certain alternative therapies are being covered by more insurance companies. While scientists have not rigorously studied most of these therapies, many of the therapies have been used in treatment for hundreds or thousands of years and rely on the healing experiences of patients for promotion.

Key words: Integrative medicine, Infertility, Therapy.

O-134

Attitude of women with IVF and spontaneous pregnancies towards prenatal screening

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Introduction: Many women who undergo assisted reproduction technology (ART) are over 35 years of age, either because of years spent attempting pregnancy or because of conscious choice to delay childbearing. This puts their offspring at an increased risk of aneuploidy which is known to increase with age. Advanced paternal age also may contribute to genetic risks, although genetic counseling and prenatal diagnosis are usually not advised until the male partner is over age 55 years. Karyotype is reported to be abnormal in 8-15% of azoospermic men and 6% of those with sperm counts <10 million/ml. Microdeletions of the Y chromosome have also been diagnosed in 10-45% of men with severe oligospermia. In addition, children born following ART or infertility treatment and those born after long periods of infertility are at increased risk of birth defects compared with spontaneous conceptions. Because of all these risks, many centers offer karyotyping for all men with oligozoospermia or azoospermia of unknown etiology and offer genetic counseling and prenatal diagnosis to all couples undergoing ICSI. Nowadays, prenatal diagnostic testing using triple (alpha fetoprotein, beta-hCG and unconjugated estriol) or quadruple serum analysis and amniocentesis are offered routinely to pregnant women at risk of chromosomal abnormalities while serum analysis

does not entail any risk to the mother or her fetus, amniocentesis is associated with several complications factors influencing a pregnant woman's decision to accept prenatal testing are largely undefined our study aimed to compare the acceptance rate of prenatal diagnosis in women who conceived through IVF/ ICSI (cases) with that of women who conceived spontaneously.

Materials and Methods: Retrospective chart review all primiparas carrying singletons who were offered prenatal testing (triples screen /amniocentesis) from 2004 – 2007. The influence of IVF /ICSI on the acceptance of prenatal screening was evaluated.

Results: Factors that influence a pregnant women's decision to accept or decline genetic amniocentesis are largely undefined and are usually based on ill-supported data or personal experiences. Among these factors are the method of conception, age parity twin gestation, socioeconomic background and religion. A study by Antoine (2008) showed the rate of utilization of prenatal testing was independent of the infertility cause. Multiple logistic regression analysis revealed that women who conceived through IVF/ICSI were lower than 35 years old. Their socioeconomic classes were less likely to perform triple screen test, and women who conceived through IVF/ICSI and those of lower socioeconomic class were less likely to perform amniocentesis.

Conclusion: There was a significant difference in acceptance rate of prenatal diagnostic testing between women who conceived Through IVF /ICSI and those who conceived spontaneously. Women who conceived through IVF/ICSI were less likely to opt for prenatal diagnosis even after controlling for confounding variables.

Key words: IVF, ICSI, Reproduction.

O-135

Knowledge, attitude and factors towards the use of herbal medicine in patients referred to an infertility treatment centers in Tehran

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Introduction: The plants are one of the first and most available resources used in the treatment of different diseases since at least 5000 years ago, at the time of Sumerian. Despite the increase in chemical drugs, it seems that patients want to use herbal medicines increasingly.

Materials and Methods: Information gathered through the questionnaire and interviews. The mean, standard deviation and prevalence were analyzed by SPSS.

Results: In this study 306 couples who referred to Vali-e-asr Reproductive Health Center (Hospital) in Tehran were reviewed. The results showed that 145 patients (47.7%) had full consciousness about medicinal plants. 1.28% used herbal medicine as a supplement to other treatment, 90.8% used herbal medicine while they informed their doctor. Also 62.8% of women and 34.9% of men were familiar with herbal medicines.

Conclusion: The results indicated that belief and knowledge of herbal drugs to patients in both groups were the same sex and significant correlation between plants and gender recognition there. The performance of both sexual performance used to plant drugs were the fact that infertility patients Stigma to create and personalize any way trying to resolve this problem seems to act should be used arbitrary herbal drugs was worried. The results of this study seem to get detailed biographies and full consultation is essential. The one hand, the studies on herbal drugs awareness distributors and not the optimal amount seems, editing staff-approved instructions for these people is essential.

Key words: Infertility, Herbal medicine, Tehran.

4-Ethics

O-136

Couples' concurrence and ART treatments

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As the infertility treatment beside collaboration of the patient requires unconditional and full cooperation of the patient's partner, so it is different from the other medical treatments.

The question is whether the couples because of their relational problems do not even agree on basis of the treatment and are not able to complete it. A 40 years old woman alongside her 45 years old husband and 12 years history of infertility have come to the one infertility clinic for treatment. After medical investigations the couple is due to have IVF/ICSI and in order to complete the process has been referred to the psychiatric consultation team. Despite changing the appointment date three times the couple does not attend the consultation session. The couple stated that their marital relationship is not stable.

They also mentioned that they were living separately. However, the couple had already expressed to the medical team their interest in having a child. The psychiatric group has stated the couple's status as angry, stressed and their relationship very bad. Now, one must address the important question of whether the couple should undergo the IVF/ICSI treatments or not. And also, is it necessary to give a psychiatric therapy before the IVF/ICSI procedures?

After a two year period of psychiatric therapy, the couple's relationship has not improved.

Now, one asks the question of what to do next. Should the medical group protect the interest of prospective child/children?

These matters are fully explained, discussed and summarized.

Key words: Psychiatric therapy, IVF, ICSI.

O-137

Egg Collection in unmarried virgin women with the aim of fertility preservation

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One of the benefits of new infertility treatments (i.e., ART) is the ability to preserve the fertility of people who for physiologic or pathologic reasons are in danger of losing their reproductive cells

(gametes). Person's age and malignancies could be mentioned respectively as physiologic and pathologic reasons caused to lose fertility. At present, one of the methods of preserving fertility of women who are nearing menopause or undergoing chemotherapy treatments because suffering from a variety of cancers, is to collect, freeze and store their eggs.

Although, this important procedure is often carried out via the vaginal puncture transfer; however, this is not possible for a group of clients such as unmarried virgin women. Besides, the necessity to obtain a written consent from the clients to freeze and store their eggs, the consequence and side effects of the both abdominal transfer and the vaginal transfer and the difference between these two methods must also be explained to the clients. Assuming the both methods would produce equal results, could we act according to the client's choice?

Another question is whether the vaginal transfer is essentially acceptable for virgin women and is there a need to fulfill any civil and legal requirements?

A 42 years old virgin with increased FSH serum level and the likelihood of nearing menopause requested the freezing of her eggs with the aim of preserving her fertility. However, because of previous successive surgeries the chance of success of transabdominal puncture is almost zero. Meanwhile, the above mentioned method because of an internal abdominal adhesiveness once before has not resulted in obtaining egg. However, now supposing the necessity of transvaginal puncture what should be done? The client initially underwent an exact medical examination in one infertility clinic and her hymen was intact. The hymen status, the above mentioned surgery, reason and the result have been reported to the legal authority. If there is a previous mental and apparent history, a legal representative could adapt a more appropriate solution for the citizen's difficulty. It seems the hymen and medical justification for the transvaginal operation must be certified and brought to the attention of the legal representative. And in case of a need the legal representative would seek confirmation of an expert, the coroner.

At the end of the operation the hymen must be repaired and the process again certified by the clinic. The legal representative must then act to register the history. It is noteworthy that the medical centers in dealing with this sort of situation, firstly adapt a similar procedure. And

secondly, via conveying the matter to the country's legal authority with consistent method, encourage the legal authorities in reaching an appropriate decision and adapting undivided procedure. These matters are fully explained, discussed and summarized.

Key words: Egg collection, Fertility preservation, Transvaginal procedures in virgins, Iranian legal system.

O-138

Embryo donation in fertile couples

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Under the Iranian law the embryo donation to use in Assisted Reproductive Technology (ART) is reserved just for infertile couples. However, the above mentioned treatment can be made to the couples whose children are likely to be infected with specific genetic diseases. It seems there should be some revision in the law or the procedure to address this important matter. This is because couples such as a 38 years old woman and a 40 years old man who have been married for more than five years and both are infected with the alpha-thalassemia minor and have come to one infertility clinic they are not considered as infertile by medical definition. These couples both have gametes and the likelihood of being fertile is as same as the rest of the population. But, two factors will prevent them from having children. First, the probability of each child being infected with the alpha-thalassemia major is 25%. And second, the current pre-birth diagnosis procedures such as PGD are not able to identify the alpha-thalassemia major. Now, it raises the question of what to insert in the certificate issued in couples' name in order to obtain the court's permission to use donated embryo. Though, the couples do not agreed to use donor egg. These matters are fully explained, discussed and summarized.

Key words: Couples, Permission, Embryo, Donation.

O-139

Infertility treatment in middle age patients

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In this study the question of whether the physician addresses all the patient's demands or only accepts the rational requests are discussed.

A 45 years old woman with FSH=11 and her 55 years old husband with 20 years history of infertility and six times failed ART attempts, have come to the Avicenna Infertility Clinic for treatment. After medical investigations and evaluation of the possible causes of unsuccessful treatments, sufficient information is given to the couple in the consultation session. The point is that the couple insists on treatment using their own gametes. The medical group with explanations of probable lack of suitable egg and also weak chance of success based on history of IVF/ICSI successive failures during the past several years, has not been able to persuade the couple to drop their demand. On the other hand, the couple insists on deferring donation treatment to a later date. In other words, the medical team absolutely does not recommend the couple's treatment via IVF/ICSI and the couple do not accept the donation treatment. Now, the team would be faced with many questions. First, whether the physicians are obliged to obey demands of patient despite their contradiction with medical sciences? Second, essentially how many times the unsuccessful ART treatments should be repeated? Third, whether the infertility treatments, regardless of donation or non - donation, should depend on couple's age? That means, what is the upper age limit for the couples to be in a suitable condition to have children and also, can they be referred to the court in order to obtain permission to use embryo donation?

Key words: ART, IVF, ICSI, Middle age patient.

B- Poster Presentations

1- Infertility, Gynecology

P-1

A survey of metabolic syndrome in first degree relatives of patients with polycystic ovarian syndrome

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Introduction: Polycystic ovarian (PCO) syndrome is one of the most prevalent endocrine disorders among women. In addition to the patients, their first degree relatives are exposed to some risk factors such as central obesity (increased ratio of waist circumference to buttock around), insulin resistance, hyper insulinemia, hypertension, diabetes mellitus type 2, abnormal lipoproteins and impaired glucose tolerance. Due to the high prevalence of PCO among women and its outcomes among their first degree relatives, that is necessary to recognize high risk people. We conducted this study in order to survey metabolic disorders in first degree relatives of patients with polycystic ovarian syndrome.

Materials and Methods: This is a case-control study in which 107 individuals as case group and 107 individuals as control group were evaluated. After registering their blood pressure, height and weight, a blood sample was obtained from all participants in order to assay their serum insulin, blood sugar, testosterone and lipoproteins. Then participants were supposed to drink 75 gr glucose solutions and after lapsing 2 hours, a blood sample size was taken again from all participants. After accomplishing biochemical tests, data were gathered and analyzed by means of independent t-test and Fisher's exact test as well as chi square. A p-value less than 0.05 was considered as statically significant.

Results: The mean of fasting blood sugar, blood pressure, serum testosterone, total cholesterol, LDL, HDL and triglyceride in fathers, mothers and sisters of control group were much different from case group ($p < 0.05$). The mean of fasting blood sugar, serum testosterone, LDL triglyceride in brothers control group were much different from case group ($p < 0.05$). The amounts of impaired glucose tolerance, high blood pressure and metabolic syndrome according to ATPIII

significantly was higher in fathers of case group ($p > 0.05$).

Conclusion: The first degree relatives of women especially fathers suffering from polycystic ovarian syndrome are exposed to metabolic syndrome.

Key words: *Metabolic disorders, Polycystic ovarian syndrome, Insulin resistance, Impaired glucose tolerance.*

P-2

A survey of abnormal blood pressure and hyperandrogenemia in first degree relatives of women with polycystic ovarian syndrome referring to gynecology clinics of Shiraz Medical University

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Introduction: One of the most prevalent (4-8%) endocrine disorders among 15-45 years old women is polycystic ovarian (PCO) syndrome. In addition to the patients, their first degree relatives are exposed to some risk factors such as hypertension and hyperandrogenemia. Due to the high prevalence of PCO among women and its outcomes among their first degree relatives, that is necessary to recognize high risk people. We conducted this study in order to survey hypertension and hyperandrogenemia in first degree relatives of patients with polycystic ovarian syndrome.

Materials and Methods: In this case-control study 107 first degree relatives of women with polycystic ovarian syndrome as case group and 107 individuals as control group were studied in 1387. After registration, all the participants completed a test assessing demographics. Then take blood pressure and sample blood from all participants in order to assay their serum androgens. After accomplishing biochemical tests, data were gathered and analyzed by means of independent t-test and Fisher's exact test as well as chi square. A p-value less than 0.05 were considered as statically significant.

Results: The mean of total androgens and high level blood pressure of control group were much different from case group ($p < 0.05$).

Conclusion: The first degree relatives of women suffering from polycystic ovarian syndrome are exposed to abnormal blood pressure and hyperandrogenemia.

Key words: *Polycystic ovarian syndrome, Hypertension, Hyperandrogenemia.*

P-3

The human tragedy of unsafe abortion

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Introduction: Unsafe abortion is a public health concern because of its impact on maternal morbidity and mortality. That is the termination of a pregnancy carried out by someone without the skills or training to perform the procedure safely, or in a place that does not meet minimal medical standards, or both. Although induced abortion is illegal in Iran except when done to save a woman's life, and some fetal abnormalities. The practice is believed to be common. This study design to deal with the health impact of unsafe abortion and to reduce the recourse to unsafe abortion through expanded and improved family-planning services.

Materials and Methods: We performed a cross-sectional study of unsafe abortions due to unwanted pregnancy (Shiraz, Zeinabieh Hospital, 2008–2009; n=190) by fulfilling a questionnaire including demographic and specific items regarding abortion and family planning history.

Results: The results from this study demonstrated that the most implicated group was in the 21-38 years old (mean 26±2), the most complication was incomplete abortion (78.94 %), 21.05% of all were admitted due to septic abortion, TAH was done for 3.68% and colostomy due to bowel perforation was done for 1.57% of all patients.

Conclusion: Since a restrictive abortion law has not succeeded in stemming the practice of abortion in the country, and the adverse health impacts of unsafe abortion, it is clear that a more flexible approach to the problem is now needed; perhaps some more situations such as rape should be added to the list of indications of safe abortion in future.

Key words: *Unsafe, Abortion.*

P-4

Comparing the oxidative stress indices in women with primary infertility with control group

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Introduction: Free radicals derived from molecular oxygen are highly reactive metabolites called reactive oxygen species (ROS). Normally, a balance exists between concentrations of reactive species and antioxidant scavenging systems. ROS can affect a variety of physiological functions in the reproductive tract, and excessive levels can result in precipitous pathologies affecting female reproduction.

Materials and Methods: The present study aimed to assess systematic oxidative stress, as reflected by plasma activities of antioxidant enzymes in erythrocytes [glutathione peroxidase (GPX), superoxide dismutase (SOD) and total antioxidant capacity of plasma by FRAP (Ferric Reducing /Antioxidant power Assay)]. In this case control study, twenty five women with primary infertility of saveh (mean age 28 ±3 years) were studied. Twenty five healthy women with once childbirth served as a control group. Plasma FRAPS and enzyme activity of GPX and SOD washed red blood cells were measured with spectrophotometer.

Results: Results showed that total antioxidant capacity of plasma and superoxide dismutase activity were lower in women with primary infertility in compare to control group (p<0.05). But glutathione peroxidase was similar in two groups (p>0.05).

Conclusion: The study demonstrates the presence of oxidative stress in plasma of women with primary infertility: compared with primary healthy women with once childbirth, infertile women had lower FRAP and enzyme activity of SOD washed red blood Cells. These findings suggest that oxidative stress in primary infertile women may be consequence of an imbalance in oxidant/antioxidant homeostasis. Therefore it may be useful to recommend antioxidant medications or diet for these patients.

Key words: *Primary infertility, Reproduction, Antioxidant capacity, Superoxide dismutase.*

P-5

Comparison of fixed-dose vs. low dose Step-up human menopausal gonadotropin regimens for polycystic ovary syndrome patients undergoing assisted reproductive technique

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Introduction: Polycystic ovarian syndrome is a health problem that can be accompanied with serious complications such as infertility and increased the risk of endometrial and breast cancer. There are many debates about the best ovulation induction protocol used for these patients.

Materials and Methods: This retrospective study aimed to compare fixed-dose vs. low dose step-up Human Menopausal Gonadotropin (HMG) regimens for polycystic ovary syndrome patients undergoing assisted reproductive technique. A total of 198 PCOS women entered the project. Fixed dose protocol was applied in 143 cycles and step up regimen was used in 55 cycles. Outcomes and complications of these regimens were compared in this cross sectional study.

Results: There was not any significant difference about age, type and cause of infertility, infertility duration, LH/FSH ratio, level of estradiol between two groups. There was not any significant difference in the number of gonadotropin injections, number of retrieved oocytes and transferred zygotes, chemical and clinical pregnancy, ovarian hyperstimulation syndrome (OHSS) and cycle cancellation. The need to change the stimulation protocol was significantly higher in fixed dose regimen.

Conclusion: The step up regimen is preferred to fixed dose regimen due to less need to change the stimulation protocol. Complications such as OHSS and inadequate response are the major reasons of failing one method.

Key words: PCOS, Step up regimen, Fixed dose regimen.

P-6

The results of laparoscopy in infertile females who referred to the Fatemeh Zahra Infertility Center in 1386-87

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Introduction: Infertility is one of the important health and treatment problem in society and about 10-15% of couples suffers from this problem during the age of fertility and depend on the reasons of infertility, there are different methods of diagnosis and treatment, such as laparoscopy. Laparoscopy is one of the valuable diagnosis method in consideration the tubals and peritoneal in infertile females.

Materials and Methods: This descriptive study was performed on 112 infertile women that

referred to the Fatemeh Zahra (S) infertility center in 1386-87. Diagnosis laparoscopy operation was done to evaluate the reasons of infertility. The data were collected and analysed by SPSS (15).

Results: 77.7% of women had the primary of infertility and 22.3% had the secondary one. Mean females' age was 30.04 ± 6.18 years and average duration of infertility is 5.44 ± 3.42 years. The most abnormal result in laparoscopy was obstruction of tubals (26.7%), PCO (17.9%), adhesiveness (17.9%) and endometriosis (15.2%).

Conclusion: In high risk infertile females such as; old age, long time infertility, PCO and abnormal HSG, laparoscopy must be considered as a primary diagnostic method.

Key words: Laparoscopy, Infertility, Hysterosalpingography.

P-7

Prevention of diabetes melitus in patients with PCO syndrome referred to Shiraz Fertility and Infertility Center

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Introduction: The relation between glucose intolerance and hyperandrogenism was first described by Archard et al. in famous report "bearded diabetic women" in 1921. About 40% of women with PCOs have glucose intolerance (31%) or over diabetes (7.5%). Although obesity and age increase the risk but glucose intolerance is also seen in young and thin women with PCOs. This is clinically significant that PCOs women have 5 to 10 folds higher risk for developing glucose intolerance, so it is beneficial to screen women with PCOs for glucose intolerance one or two times a year. In a prospective study, non-ovulatory women with PCOs had 5 folds higher risk for developing diabetes mellitus in comparison with the control group who were in the same age. Non ovulatory women with hyperandrogenism and hyper insulinemia are in higher risk for developing non insulin dependent diabetes Miletus. The initiation of the disease in these patients is 30 years earlier than that in the normal population. Then it seems necessary to do periodic glucose tolerance test in these women. According to these studies all non ovulatory women with hyper androgenism should be evaluated for glucose tolerance and resistance because glucose intolerance and type 2 D.M are higher prevalent in PCOs patients and because of high rate of these problems in Iran and

also because most of the patients know little about their disease and the significance of glucose intolerance and many of them develop D.M later and also because in type 2 D.M glucose intolerance develops gradually and the disease may not be diagnosed for some years, screening of PCOs patients for risk factors of type 2 diabetes seems necessary.

Materials and Methods: This was a descriptive – analytic study.

Results: All of the patients were in the age group of 20-29 years. Most of them had low education 22% of them had positive history of diabetes and 71.3% of them didn't have pregnancy. Average BMI of them was 27.34 with standard deviation 51.6.

Conclusion: Early diagnosis and proper treatment of DM can decrease the side effects of it and so decrease the health cost and improve the health care in country.

Key words: *Diagnosis, Hyperandrogenism, PCO.*

P-8

Sero prevalence of human cytomegalovirus (CMV) in 225 pregnant women and their infant in Northeast of Iran

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Introduction: Human Cytomegalovirus (CMV) is the most common congenital infection and can follow primary and recurrent maternal infection. CMV is found universally throughout all geographic locations and in all socioeconomic groups. Congenital and perinatal infection rates are usually higher in developing countries than developed countries. CMV is an endemic disease in women of childbearing age in Iran. In the present study the prevalence of CMV infection and clinical status related to this infection were assessed in 225 pregnant women and their infant in northeast of Iran (Khorasan Razavi province).

Materials and Methods: To evaluate the CMV infection rate in pregnant women and their infants in northeast of Iran a prospective serological study was conducted on a randomly selected sample of pregnant women (n=225) and their newborn infants (n=225). Sera were collected from the mothers and umbilical cord of infant at the time of delivery, then the specific anti CMV antibodies, IgG and IgM, were detected using commercial kits. Moreover, a questioner was filled for all of the

subjects to evaluate the relationship between the occurrence of infection, clinical status and demographic data.

Results: Although, all of the mothers and their neonates were positive for CMV specific IgG, six mothers were positive for CMV specific IgM which their infants were negative.

Conclusion: It seems that CMV transmission from infected mothers to their fetus had not occurred. However, in one infant we find clinical features with malformation such as microcephaly by radiologic evaluation (CT scan).

Key words: *Anti CMV IgG, Pregnant women, Infant, Anti CMV IgM.*

P-9

The effect of the number of laparoscopic ovarian drilling in improving reproductive outcome in patients having polycystic ovarian syndrome resistant to clomiphene

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Introduction: Polycystic ovarian syndrome (PCOS) is the most common cause of anovulation. Hence laparoscopic ovarian drilling is utilized to treat PCOS resistant to clomiphene, this paper investigates the efficacy of 5-10 times ovarian drilling in reproductive outcomes.

Materials and Methods: This was a clinical trial conducted on 70 patients with PCOS resistant to clomiphene hospitalized in Shahid Beheshti Hospital. All patients had age less than 36 years of old, BMI≤29 kg/m², the history of infertility more than 2 years, normal partner's semen analysis and normal hysterosalpingogram. After obtaining informed consent, we randomly assigned the participants into two groups. Group one (n=35) had 5 punctures and group two (n=35) 10 ones on each ovaries, pre and 4 wks post operation testosterone, DHEASO₄, LH, FSH, fasting Insulin were evaluated. Serum progesterone level test for evaluation of ovulation and βHCG test for confirming pregnancy were carried out, after 3 month in the case of infertility, ovulation induction was performed with administration of clomiphene and gonadotropine, punctures were performed by

researcher. Outcomes including rate of ovulation, pregnancy, hormonal changes, were compared in two groups using t-test, leaven's test, paired t-test, kolmogorov-smirnov test and chi-square test.

Results: Age, duration and type infertility and BMI were not significantly different. Number of induction ovulation after operation was 71% and 77% in groups 5 and 10 punctures respectively ($p=0.58$). Pregnancy rate in groups 5 and 10 punctures was not significantly different ($p=0.15$). Before and after operation difference testosterone, DHEASO₄, fasting Insulin were not statistically significant. Before and after operation difference LH in group 10 puncture was statistically significant ($p=0.049$).

Conclusion: This study indicated that, although pregnancy and ovulation rate were higher in 10-puncture group than 5-puncture. The difference between pregnancy and ovulation was not statistically significant. So 5 puncture is recommended to prevent premature ovarian failure.

Key words: Ovarian drilling, Laparoscopy, Polycystic ovarian syndrome clomiphen-resistant, Reproductive outcome.

P-10

Cabergoline for prevention of ovarian hyperstimulation syndrome in high risk patients

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Introduction: This study was conducted in order to determine the effects of cabergoline in high risk patients to prevent severe OHSS and its complications.

Materials and Methods: This clinical trial was conducted on 75 patients at risk for OHSS who have undergone assisted reproductive techniques. The first group (intervention or case group) comprised of 50 women with the inclusion criteria who were treated with 1 mg of Cabergoline every other day for 8 days commencing from the day of ovum pick up (during the years 2007-8). The second group (historical control group) was comprised from 25 women who were similar to the former group (during the year 2006). The latter group did not receive Cabergoline; however were managed conservatively after hospital admission. OHSS, baseline characteristics, ovarian stimulation parameters, pregnancy outcomes of the under study patients were compared.

Results: Baseline characteristics and ovarian stimulation parameters of the under study patients were similar. Ovarian hyperstimulation syndrome (OHSS) incidence in cabergoline group, was significantly lower than the control group (12% vs. 48%, $p=0.001$). Embryo freezing was significantly lower in the latter group ($p=0.001$). Cycle cancellation was significantly lower in the control group (0.03).

Conclusion: Cabergoline reduces the incidence of OHSS in high risk patients and is not associated with adverse effects on pregnancy. Considering reduced incidence of severe ovarian hyperstimulation syndrome (OHSS) and decreased risk of hospitalization due to the lower occurrence of severe OHSS, cabergoline is an efficient available drug for prophylactic and therapeutic applications.

Key words: VEGF, Cabergoline, OHSS, ART.

P-11

Fertility outcome after IVF and related factors in Montaserieh Infertility Center

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Introduction: Nowadays, success rate of IVF depends on evaluation and treatment of infertility factors. Different methods of treatment and different centers have reported various rate of success. The aim of this study is to evaluate fertility outcome after IVF and related factors in Montaserieh Infertility Center.

Materials and Methods: This cross sectional descriptive analytic study was performed on 150 infertile couples following IVF in Montaserieh Hospital of Infertility Center related to Mashhad University of Medical Sciences during 2001-2006. Data was collected by a questionnaire involving woman's age, husband's age, infertility factor, spermogram, infertility period, the number of follicles caused by treatment, the number of oocytes, the number of produced and transferred fetus and treatment outcomes. Data was analyzed by SPSS software and $p \leq 0.05$ was considered statistically significant.

Results: In this study, the mean of follicles was 11 ± 6 , the mean of oocytes was 6 ± 3.9 and the mean of transferred fetus was 2.6 ± 1.5 . Also, the mean age of women was 29.7 ± 5.4 . There was significant relation between the number of follicles ($p=0.015$),

the number of obtained oocytes ($p=0.001$) and the number of transferred fetus ($p=0.001$) with the success rate of IVF. Fertility rate was 24.6% that there was no significant relation between the groups in the view of fertility rate ($p=0.12$).

Conclusion: From the most important and effective factors for predicting the outcomes of IVF are ovarian response to ovulation stimulation and the number of transferred fetus.

Key words: Infertility, Fertility, IVF, ART, Fertility outcomes.

P-12

Study of distress among infertile women referred to Larestan gynecological clinics in 2009

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Introduction: Infertility is an essential crisis threats psychosocial well being of couples. Each of couples may response differently to infertility and its treatment process. But the most common responses in both are; anger, decrease in self-respect, difficulty in relation with others, decrease in life satisfaction, anxiety, and depression. Although psychological effects of infertility could be observed on both women and men, women have suffered more intensively. For this reason, it is important to determine the psychosocial status of women during diagnosis of infertility and its treatment process. As such, authors were interested in women distress with the demands of fertility treatment.

Materials and Methods: This study was a descriptive design research that was carried out in Larestan gynecological clinics in 2009 on 50 infertile women (15–35 years old). Instruments were infertility distress scale and demographic variables form. Scale involves 21 items with 16 positive (straight) statements and 5 negative (inverse) statements. Positive items were scored on a four point scale anchored by 1: never feel and 4: always feel, but negative items were scored adversely. Total possible scores would be ranged between 21 and 84 points. The scale based on one component with no subscales. The higher total scores represented the severity of effect caused by infertility. The Cronbach's alpha value was 90.56. Data were analyzed by use of SPSS 13.

Results: The average age of all participants was 26 ± 4.2 years. The percentage of women with primary school was the highest. The result of this study showed that the mean of infertility distress scale was 56.66 ($SD=9.41$).

Conclusion: The most important goal in infertility treatment is to support couples to have a baby. But whatever the outcome, it should not be ignored by nurses to give care couples for their full healthiness. For this reason, it is important to determine the psychosocial status of women during diagnosis of infertility and its treatment process.

Key words: Infertility, Women, Distress.

P-13

Thyroid autoantibodies in euthyroid women with recurrent abortions and infertility; a Tehran-based study

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Introduction: Evidence confirms the high prevalence of thyroid peroxidase (anti-TPO) and anti thyroglobulin (anti-Tg) in the etiology of recurrent abortions and infertility.

As iodine deficiency was once endemic in Iran, supplemental therapy by iodized salt began 14 years ago and little data is at hand about the prevalence of these antibodies in Iran in different groups of fertile or infertile individuals.

Materials and Methods: Four groups of euthyroid women referring to Avicenna Infertility Clinic in Tehran were selected; 95 cases as fertile controls and 70, 79 and 137 cases with male and female factor infertility and recurrent abortion respectively. TSH, anti-TPO and anti-Tg were evaluated by chemiluminescent immunoassay.

Results: High titers of anti-Tg were present in the recurrent abortion group. There were no statistically significant differences between the four groups.

Conclusion: The prevalence of the above mentioned autoantibodies in euthyroid controls was about 25% and high titers of anti-Tg were seen in the recurrent abortion group but there were no statistically significant differences between the four groups. It seems that more comprehensive studies are needed to reach a common conclusion about thyroid autoantibodies in women with recurrent abortions in different groups and parts of Iran.

Key words: Recurrent abortion, Infertility, Autoantibody, Anti-thyroglobulin antibody, Anti thyroid peroxidase antibody, Euthyroid.

P-14

Different regimen of progesterone for luteal phase support in IVF cycles

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Introduction: Supplementation of luteal phase with progesterone is prescribed for women undergoing IVF routinely. The objective of this study was to compare the progesterone in oil, intravaginal progesterone and 17- α hydroxyprogesterone caproate (17-HPC) on pregnancy rate in women undergoing in vitro fertilization embryo transfer cycles.

Materials and Methods: A prospective randomized study was performed in Royan Institute between March 2005 and March 2007. The Inclusion criteria were the use for GnRH down-regulation and age < 40 years. 154 patients were assigned to receive one of the treatments.

Results: No differences between groups were found in age, body mass index, causes and duration of infertility, presence of primary/secondary infertility and menstrual pattern. The endometrial thickness on embryo transfer day was similar (9.35 ± 1.41 , 9.29 ± 1.53 , 9.23 ± 1.55 mm, $p=0.92$). No statistical significant was found for biochemical pregnancy (37.3%, 36.5%, 28.3%; $p=0.56$) and observation of gestational sac (35.3%, 34.6%, 26.4%; $p=0.55$) between three groups.

Conclusion: Our study manifested the effect of three types of progesterone were similar on pregnancy rate. We suggest the use of 17-HPC during the luteal phase in patients undergoing IVF-ET program because of low number of injections which is needed.

Key words: Progesterone, IVF, Luteal phase.

P-15

Dopamine agonist- cabergoline- and implantation rate, in women undergoing assisted reproduction treatment

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Introduction: Ovarian hyper stimulation syndrome (OHSS) is the most serious complication of ovulation induction. Dopamine agonist treatment constitutes a major advance towards the management of severe OHSS, whose activation is involved in the regulation of angiogenic events mediated by VEGF/VEGFR-2 signaling. However, the early stages of pregnancy are highly dependent on ovarian and uterine angiogenesis. The present study was designed to provide clinical confirmation of whether Cabergoline affects angiogenesis in the human endometrium, by evaluating implantation rate following administration of the drug.

Materials and Methods: This historical cohort study was conducted on existed data of 115 patients, 20 to 40 years old, underwent assisted reproductive treatment (ART) between March 2007 and September 2008. Patients with high probability for developing OHSS had received cabergolin medication. Implantation rate was evaluated in patients who had received dopamine agonist compared who had not.

Results: Analysis was performed on the complete data of 45 cases medicated by cabergolin and 70 cases that were not. Secondary infertility was significantly higher in women who received cabergoline ($p=0.05$). As expected, none of the patients displayed OHSS. There were no different in the etiology of infertility between groups. Administration of GnRH agonist or antagonist protocols also did not differ in women receiving cabergoline and who did not. The number of oocytes retrieved was significantly ($p=0.00$) higher in women who received cabergoline. However, the number of embryo transferred and the number of ZIFT did not differ between the two groups.

Our study demonstrated no significant difference in implantation rate and fertilization rate among women received cabergoline or not. There were also no statistically significant difference in chemical pregnancies, clinical pregnancies and ongoing pregnancies among two groups.

Conclusion: Administration of dopamine agonist- Cabergolin- in women undergoing ART in order to prevent OHSS, is safe and it does not affect ART outcomes.

Key words: Ovarian hyperstimulation syndrome, OHSS, Dopamine agonist, Cabergoline, Assisted reproductive treatment, ART, Implantation rate.

P-16

High levels of CA125 (over 1000 IU/ml) in patients with gynecologic disease and no malignant conditions: 3 cases and literature review

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Introduction: To report the very high serum levels of CA125 in patients with benign gynecologic disease which manifest as pelvic mass?

Materials and Methods: Clinical data of 3 cases with high levels CA125 over 1000 IU/ml in Vali-e-Asr hospital who had benign gynecologic conditions was gathered.

Results: Three patients were scheduled for laparotomy as ovarian cancer and leiomyosarcoma. Histologic results after laparotomy showed uterine myoma in two patients and endometrioma in a third patient.

Conclusion: High levels CA125 over 1000 IU/ml, may be showed in other gynecologic conditions with no malignancy. So, other clinical and imaging data could be helpful for differential diagnosis of these patients.

Key words: CA125, Ovarian cancer, Pelvic mass, Myoma, Endometriosis.

P-17

Sexual activity during pregnancy

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Introduction: One of the best times in a woman's life is pregnancy, following by hormonal and physical changes, could affect sexual activity during pregnancy the research indicates that 68 percent young mothers were not informed during pregnancy by a gynecologist or midwife about sexual problems so the aim of this study is to explore this essential subject.

Materials and Methods: This study was conducted on November 2007 in Shiraz. For data gathering, we prepared a valid questionnaire and interviewed 189 women in second and third trimester referred to Hafez prenatal clinic. Most questions were open ended and about: the frequency of intercourse, the attitude changes, satisfaction level and dyspareunia.

Results: Data analysis of sexual frequency during pregnancy showed that it was reduced in 85.71%, while 10.05% had no intercourse, 2.64% did not mention anything and it was increased in 1.58%. The main reasons for decreasing were: dyspareunia,

fear of abortion or trauma to fetus, fatigue, nausea, no sexual stimulation, body shape changes and large abdomen.

Conclusion: Sexual activity has a noticeable effect on couple's life during pregnancy so it is very important to have a regular training for them.

Key words: Sexual activity, Pregnancy, Couples life.

P-18

The level of serum anti mullerian hormone at the time of HCG administration in ART

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Introduction: Anti mullerian hormone (AMH) is a member of the transforming growth factor-beta superfamily which is synthesized in the granulosa cells of preantral and small antral follicles.

AMH is detectable at birth and reaching the highest values after puberty in adult women. AMH value is strong predictor for ovarian response.

Materials and Methods: A total of 60 women enrolled in our ART program were recruited for the study. The inclusion criteria were: 1) first cycle of ovarian stimulation, 2) <40 years of age, 3) both ovaries present on transvaginal ultrasound, 4) no previous history of ovarian surgery, 5) No exposure to cytotoxic drugs or pelvic radiation therapy. All women received GnRH analog and ovarian stimulation for IVF or ICSI and ET. The characteristics of the study subjects were: female age, BMI, antral and preantral follicle count, number of mature oocyte and embryo, basal E2, concentration of E2 and AMH at the time of HCG administration, implantation and ongoing pregnancy rate.

Results: By the independent sample test, AMH level less than 5 ng/ml calculated abnormal and AMH level $\geq 5-15$ was normal. There were statistically significant association between serum AMH and age, follicle >18 mm in diameter E2 concentration, implantation and ongoing pregnancy rate. We could not find significant correlation between BMI, embryo count, oocyte count and AMH concentration.

Conclusion: Circulating AMH has the ability to predict response to stimulation with exogenous gonadotropins. This biomarker has the potential to be incorporated in to work-up protocols to predict patient ovarian response to treatment.

Key words: Endometrial receptivity, Local injury, Implantation, IVF outcome.

P-19

Local injury to the endometrium on the day of oocyte retrieval has a negative impact on implantation in assisted reproductive cycles: a randomized controlled trial

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Introduction: To evaluate the effect of local injury to the endometrium on the day of oocyte retrieval on implantation and pregnancy rates in assisted reproductive cycles.

Materials and Methods: In a prospective controlled trial, a total of 156 patients, < 38 years old, in their first IVF cycle were randomized. In 77 patients, two small endometrial samples from anterior and posterior walls of uterus were obtained with a Novak curette on the day of oocyte retrieval and in 79 patients no intervention was performed.

Results: The experimental and control patients were matched regarding women's age, body mass index, basal FSH, duration and etiology of infertility, treatment protocol, number of retrieved oocyte, endometrial thickness, percentage of intracytoplasmic sperm injection performance, fertilization rate, the percentage of patients with good- and top-quality embryos and the number of embryos transferred. The implantation rate (7.9% vs. 22.9%), clinical pregnancy (12.3% vs. 32.9%; odds ratio=0.25; 95% confidence interval=0.12-0.66; $p<0.05$) and ongoing pregnancy (9.6% vs. 29.1%; odds ratio=0.25; 95% confidence interval=0.10-0.64; $p<0.05$) rates were significantly lower in experimental group, compared with controls.

Conclusion: According to the results of this study, local injury to the endometrium on the day of oocyte retrieval disrupts the receptive endometrium and has a negative impact on implantation and IVF outcomes.

Key words: Endometrial receptivity, Local injury, Implantation, IVF outcome.

P-20

Outcome of IVF in women with endometriosis

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Introduction: In-vitro fertilization (IVF) is an effective infertility treatment for women with endometriosis. Endometriosis may be a factor in the infertility of up to 80% of couples seeking medical assistance to conceive. The wide range of reported prevalence rates arises primarily because the definition of what constitutes minimal peritoneal disease has changed over time and it is this type of disease, rather than more severe endometriosis involving the ovaries, that is most commonly seen in infertile women.

Materials and Methods: This article presents the result of a systematic review about outcome of IVF in women with endometriosis.

Results: In infertile women with endometriosis, treatment options depend upon factors such as the severity of endometriosis, the woman's age, the duration of infertility, and associated additional causes of infertility, e.g. impaired sperm function. Results of IVF (in terms of pregnancy rates), are influenced by the existence of endometriosis, but this influence remains controversial, and focused on three possible points: poor ovarian reserve (and ovarian response), poor quality of oocytes and embryos, poor implantation. It seems that mild and moderate endometriosis has few deleterious effects on ovarian reserve, ovarian response, and pregnancy rates.

Conclusion: In-vitro fertilization (IVF) and embryo transfer is a treatment option that is increasingly offered to couples irrespective of the severity of disease present. Previous treatment by Gn-RH agonists also improves the outcome of IVF.

Key words: IVF, Embryo transfer, Gn-RH agonists.

P-21

Survey of raloxifene effect on human endometrial tissue cultured in three-dimensional fibrin matrix

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Introduction: Raloxifene was developed for breast cancer and osteoporosis treatment. It has estrogen-agonistic effects on bone and lipids and estrogen-antagonistic effects on the breast and uterus. There is no available data on in vitro effect of raloxifene on endometrial tissue. The aim of present work is to investigate raloxifene effect on

human endometrial explants cultured in three-dimensional (3D) fibrin matrix.

Materials and Methods: Endometrial samples (n=8) were cut into 1x1mm fragments and implanted between two layer of fibrin jell made by fibrinogen solution (3 mg/ml in medium 199 +thrombin). Cultures were performed in 24-weel culture plates. Each sample were divided into control group which received M199 supplemented with FBS and cases groups which received M199 and one raloxifene doses (0.1, 1, 10µM). Endometrial tissues were photographed at the beginning and end of study period. Tissue growths were determined by scoring system. Data were analyzed by Kruskal-Wallis test and $p<0.05$ were considered significant.

Results: There is significant difference between groups. 0.1 µM dose of raloxifene improve endometrial growth and 10 µM inhibit it.

Conclusion: Raloxifene shows dose dependant effect on human endometrium.

Key words: Raloxifene, Humane endometrium, 3D culture, Fibrin matrix.

P-22

Maternal fetal attachment: A comparative study in primgravidas and pregnant women with history of fetal or neonatal death

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Introduction: History of fetal or neonatal death not only can have a negative effect on the adaptation of a woman during pregnancy but also can have a major influence on attachment between mother and her fetus.

AIM: To comprise maternal fetal attachment (MFA) in primgravidas and pregnant women with history of previous fetal or neonatal death.

Materials and Methods: This was a comparative study. Sequential sampling method was used. We collected 120 Iranian healthy pregnant women during their third trimester from 10 health centers in Mashed in year 2006 (80 nuliparous, 40 with history of fetal or newborn death without living child). All samples had knowledge of reading and writing. The tools of this study had two main parts: personal demographic and pregnancy information form, and maternal fetal attachment scale (MFAS: Cranley, 1981). Descriptive statistics, X2, Fisher exact, T test were used by SPSS.

Results: The highest percentage of both age groups belonged to 20-24 years. A significant

difference was found in the 5 subscales of the MFAS between the primigravidas and pregnant women with history of fetal or neonatal death ($p\leq0.001$). The average of maternal fetal attachment in the primigravidas women was more than second group. The independent t-test also showed a significant difference between two groups ($p=0.000$).

Conclusion: Due to decrease of maternal fetal attachment in the pregnant women with previous fetal or neonatal death we advise that medical staffs and midwives offer various supportive, educational, guidance, and counseling program for the mentioned high risk group and their couples. We suggest continue the same research during the first and second trimester of pregnancy and postpartum period in the clients whom will be visited in the other clinics.

Key words: Pregnancy, Neonatal death, Fetal death, Maternal fetal attachment.

P-23

Comparing the effects of letrozole with danazole in patients with endometriosis: A randomized clinical trial

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Introduction: Letrozole is an aromatase inhibitor which can decrease estrogen production in peripheral tissues and endometriosis. Danazole as an androgen inhibits estrogen production in ovaries and recently has been introduced as an aromatase inhibitor; this study was designed to compare the effects of danazole with letrozole to relieve symptoms of endometriosis.

Materials and Methods: This was a randomized clinical trial study. 105 patients confirmed endometriosis by laparoscopy. These patients were randomly assigned to one of three groups: group 1 received letrozole tablet (2.5mg/day), calcium (1000mg/day) and vitamin D (800 IU/day), group 2 received danazole tablet (600mg/day), calcium (1000mg/day) and vitamin D (800 IU/day) and group 3 (placebo group) received 2 calcium tablets/day (each tablet=500mg) and vitamin D (800 IU/day). Then pelvic pain, dysmenorrhea and dyspareunia were assessed in participants before study and monthly during the study for six months. Data were analyzed via SPSS version 15 with Freidman and Wilcoxon tests.

Results: Mean age in three groups were: 32.3 ± 6 years old. There wasn't any significant difference among these three groups in mean of age.

105 participants were enrolled in this study: 38 patients in letrozole group, 37 patients in danazole group and 31 patients in placebo group. This study showed that mean of chronic pelvic pain, dysmenorrhea and dyspareunia score showed in letrozol group was less than danazole and placebo group. The Wilcoxon test showed significant difference between mean of dysmenorrhea score at 1st and 5th month after treatment (p -value<0.025).

Conclusion: This study showed letrozole can be more effective than danazole for relief of chronic pelvic pain, dyspareunia and dysmenorrheal.

Key words: Letrozole, Danazole, Endometriosis, Laparoscopy.

P-24

Evaluation of the best dose of HCG to prevent the ovarian hyper stimulation syndrome in patients with polycystic ovarian syndrome during assisted reproductive technology cycles

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Introduction: Ovarian hyper stimulation syndrome (OHSS) is one of the most serious complications of assisted reproductive technology (ART) especially in patients with polycystic ovarian syndrome (PCOS). There is no consensus about its prevention strategies. PCOS patients, compared with controls, usually have significantly higher serum E2 levels on the day of human chorionic gonadotropin (HCG) administration, develop more follicles and produce more oocytes with the result that there is a higher incidence of OHSS. We reduced administration of HCG to reducing this risk then we assessed the effect of this change on ART outcome.

Materials and Methods: We included 140 PCOS patients, enrolled for in-vitro fertilization or intracytoplasmic sperm injection in a randomized clinical trial between April 2009 and October 2009 in Novin Fertility and Infertility center, Mashhad, Iran. 40 patients received 5000 units of HCG, 42 patients received 2500 units of HCG as experimental groups and 58 patients received routine dose of HCG (10000 units) as control group. We Compared number of retrieved oocytes,

fertilization rate, amount of occurrence of OHSS (severe, middle, slight) and pregnancy rate using Chi-square and CRD test.

Results: The number of oocytes, and fertilization rate were similar in three groups. Both experimental groups (5000, 2500) significantly had slight symptom of OHSS as compared to control group (10000) and there was not significant differences between the 2 experimental groups in this way. We found significant difference between three groups in the pregnancy rate, the group who received 5000 units HCG had upper pregnancy rate in comparison the others.

Conclusion: Considering the significantly effect on decreasing OHSS symptoms and increasing the pregnancy rate, 5000 units is the best dose of HCG for PCOS patients when subjected to ART.

Key words: OHSS, PCOS, Reproduction.

P-25

Evaluation of correlation between AUB and TL on TL patients in Aran and Bidghol from 1989 to 2006

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Introduction: Tubal ligation (TL) is the most common contraceptive methods worldwide. Although, TL is one the contraceptive method, some patients are complaining of abnormal uterus bleeding (AUB), psychological, physical, social or family subsequent disorders or even hysterectomy. This study conducted on evaluating the correlation between AUB and TL along with family history, parity, abortion age and hysterectomy on TL patients.

Materials and Methods: This study carried out on 350 TL patients from 1989 to 2006.

Results: Out of 350 patients, 14 (0.04%) had AUB history after TL. Results indicated that there was no significant relation between AUB and patients parity ($p=0.20$), AUB and TL ($p=0.65$), AUB and age ($p=0.51$) while this relation was significant between AUB and hysterectomy ($p=0.002$) AUB and family history of AUB ($p=0.001$).

Conclusion: No relation was found between hysterectomy and AUB with TL. So TL suggested as a good and confident contraceptive method for women.

Key words: AUB, TL, Hysterectomy.

P-26

Effect of acupuncture on the outcome of in vitro fertilization and intracytoplasmic sperm injection

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Introduction: Acupuncture is an ancient traditional Chinese treatment technique with an empirical basis. Its theory is based on the energy flow. Imbalances are believed to cause diseases, which can be treated by stimulating specific points on the body surface. The role of acupuncture in the treatment of female infertility is unclear. The aim of this review was to investigate the effect of luteal-phase acupuncture on IVF/ICSI outcome.

Materials and Methods: Various approaches have been suggested to increase the pregnancy rate. It has been shown that the receptivity of the endometrium and the uterine contraction frequency at the time of ET are critical for embryo implantation. In a previous randomized, prospective, controlled study, it was demonstrated that acupuncture before and after ET resulted in a higher pregnancy rate compared with a group without acupuncture.

Results: The physiologic mechanisms and clinical significance of acupuncture have not been completely revealed and has been the subject of controversy. Acupuncture can activate inhibitory systems in the spinal cord, which results in segmental inhibition of sympathetic outflow.

Conclusion: Acupuncture has been used in the treatment of female infertility. Although the mechanism of acupuncture in the treatment of female infertility is unknown, studies have demonstrated its potential impact on the hypothalamic–pituitary–ovarian axis and on the uterus.

Key words: Acupuncture, Assisted reproduction, Pregnancy rate, IVF, ICSI.

P-27

Comparison of ovarian morphology, pattern of menstrual cycles and testosterone level in obese and nonobese PCOS

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Introduction: Considering the heterogeneity of PCOS (polycystic ovary syndrome), the diagnosis is difficult. It is well known that hyperandrogenism and insulin resistance are closely associated. Clinical and laboratory evaluation in both obese and nonobese PCOS patients are necessary.

The aim of present study was to compare ovarian morphology, pattern of menstrual cycles and testosterone level in obese and non obese PCOS patients.

Materials and Methods: Clinical characteristics, hormonal profile and ovarian morphology were evaluated in 54 women with PCOS (age 21-48 years), in 2 groups: obese (BMI ≥ 25) and nonobese (BMI < 25).

Results: Mean BMI of obese group was 28.5 ± 3.2 and in nonobese group was 21 ± 2.6 kg/m² ($p < 0.001$). Menstrual cycles were regular in 11 patients (20.4%) and irregular in 43 patients (79.6%). BMI of patients with regular cycles was 23.6 ± 3.6 and in those with irregular cycles was 25 ± 5 ($p = 0.36$). Mean testosterone level in obese group was 7.1 ± 1.7 and in nonobese group was 5.6 ± 2.9 ng/mL ($p = 0.69$). Ovarian morphology in obese group was normal in 8 patients (29.6%) and abnormal in 19 patients (70.4%) with p -value = 0.039. In nonobese group 12 patients had normal morphology (44.4%) and 15 patients had abnormal morphology (55.6%) with p -value=0.039.

Conclusion: Our study suggests that there is significant correlation between BMI and ovarian morphology but there is no significant difference between BMI with menstrual cycle and BMI with testosterone level. Thus both obese and nonobese PCOS patients show different presentations and it is necessary to do more studies to compare clinical features of PCOS in obese and nonobese patients for early diagnosis and management.

Key words: PCOS, Obese, Nonobese, Ovarian morphology, Testosterone.

P-28

A compression of the effect of cervical canal cleaning before IUI in infertile women

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Introduction: Intrauterine insemination (IUI) is known as a routine method for infertility treatment. The effectiveness of IUI is not identical in all cases. So in this study to evaluate different methods of IUI in order to increase pregnancy rate,

IUI with cleaning cervical canal by soap is compared with IUI without cervical canal cleaning.

Materials and Methods: This study was conducted between April 2009 and Oct. 2009 in Mirza koochak khan infertility center. After the initial investigations and omitting severe male and female infertility, 238 cases were selected and randomly divided for IUI group 1 with soap (n=125) and group 2 without soap (n=112). Variables were age, pregnancy rate, number of follicles and sort of infertility. Data were analyzed using SPSS version 14.

Results: There are not any statistical differences in age and sort of infertility between two groups. Pregnancy rate in cervical canal cleaning group was 15/1% which matches up to 9/8% in the group without cervical canal cleaning. Though it was more but these differences were not significant.

Conclusion: There have been few researches in which cervical canal cleaning before IUI has been together with an increase in pregnancy rate. In the recent study with cleaning cervical canal by soap before IUI, pregnancy rate is increased but statistical differences was not significant. So doing similar studies with more cases is suggested.

Key words: IUI, Cervical canal aspiration, Ovulation induction.

P-29

Investigating the value of hysteroscopy evaluation in successful rats of ICSI in infertile women

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Introduction: Despite numerous developments in the field of assisted reproduction, the implantation rate remains low. Among the various reasons of implantation failure, endometrial regularity has an important role. Hysteroscopy is an accurate method for evaluating the endometrial characteristics, with the ability to treat uterine pathology. The aim of the present study was to evaluate the findings on hysteroscopy and thereafter the result of subsequent ICSI in infertile Women.

Materials and Methods: In this observational study, the hysteroscopy findings and the outcomes of subsequent ICSI were evaluated in 58 infertile women admitted to Mehregan Infertility Clinic in Babol of Mazandaran. They were 25-35 years old. They had history of just male factor and normal hystero salpingography and normal hormonal tests.

In one group, ICSI was done without hysteroscopy and in the other group patients underwent hysteroscopy in early follicular phase in one cycle before ICSE. The data were analyzed with SPSS software and T test chi-square.

Results: 58 cases with mean age of 32.02 ± 3.18 years underwent ICSI without hysteroscopy and 58 cases with the mean age of 30.72 ± 7.73 years hysteroscopy was used before ICSI. Pregnancy rate in the first group without hysteroscopy was. %32.75 (19 persons) and in the other group was %44.82 (26 persons). In 27 cases in second group hysteroscopy revealed abnormal intrauterine findings including adhesions in 4 (%6.89), polyp in 14 (%24.13), hyperplasia in 4 (6.89) and submucosal myoma in 5 (%8.62) patients. After hysteroscopy and subsequent ICSE attempt using standard long protocol, pregnancy rate were not significantly higher compared with the cases without hysteroscopy.

Conclusion: According to this study we strongly suggest evaluation of endometrial integrity by hysteroscopy in patients with ICSI before entering any other fertilization procedures.

Key words: Fertilization, Endometrial, Uterine.

P-30

Thyroid dysfunction with aging in women

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Introduction: There is a mild change in hypothalamus – pituitary –thyroid axis with aging, which may be accompanied with thyroid dysfunction without clinical manifestation. The aim of this study was to evaluate thyroid dysfunction with aging in women.

Materials and Methods: This was a cross-sectional descriptive study that was performed on 100 women at the age of 40-60yr, who had referred to Gynecology and Menopausal Clinic of Ghaem Hospital, Mashhad University from Nov. 2004 to Nov. 2005. At first, a questionnaire including clinical symptoms was completed, then patients were submitted to laboratory tests including T3, T4, T3 RU, TSH, TG (triglyceride), HDL-cholesterol and LDL cholesterol. The information

was analysed by χ^2 and kruskal-wallis tests ($p \leq 0.05$) was considered as statistically significant.

Results: In aged women, the prevalence of subclinical hyper and hypothyroidism was 5% and 1% for overt conditions. In the women of 51-60 yr, the prevalence of subclinical hypothyroidism reached to 6.25%. There was an increasing level of TG in 20% of subclinical hypothyroidism and 13.64% of euthyroidism. There was also an increase in serum LDL cholesterol levels in 40% and 22.73% of two groups, respectively.

Conclusion: Subclinical thyroid dysfunction increases with aging and is relatively common in women. It is recommended that all aged women, should be gone under screening test for thyroid dysfunction.

Key words: Hypothyroidism, Hyperthyroidism, Thyroid dysfunction, Sub clinical hypothyroidism, Subclinical hyperthyroidism, Aged Women.

P-31

Etiology of infertility in infertile women and men undergoing intrauterine insemination treatment

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Introduction: Infertility is an emotionally charged problem affecting an estimated 15% of all couples. It is estimated that the 80 million people from all parts of the world suffer from Infertility. The objective of this study was to identify the cause of infertility in the cases undergoing in intrauterine insemination cycles.

Materials and Methods: We performed a descriptive – cross sectional study among of infertile couples (no=158) who were treated with IUI. Before enrollment, each couple underwent a basic fertility workup for infertility, including, medical history, semen analysis in the man; confirmation of an ovulatory cycle, endometrial thickness by ultrasound, basal body temperature and /or mid luteal progesterone, tubal patency, hysterosalpingography in the woman. Indications for IUI were male sub fertility, cervical factor sub fertility and unexplained sub fertility. For each couple, we registered and evaluated etiology of infertility for all couples according to above clinical and Para clinical findings. All the

statistical analyses were conducted using SPSS software.

Results: Our analysis considered 158 patients; the majority of subjects (85%) had primary infertility, while only 15% was secondary. Causes of infertility were the male factor (44.9%), unexplained (26.6%) and female factor (24%). The remainder of etiology was (4.5%) related to the both male and female problems. Cumulatively, the major factors in male were low count of motile sperm, varicocele and ectopic testis. The female factors were cervical mucosal defect, polycystic ovary, tubal defect and hormonal problem. The pregnancy rate was 19.6%.

Conclusion: The result of this study shows that the suitable success of pregnancy may be received after IUI treatment when infertility is primary and its etiology is due to male factor. Future studies are needed to replication the current findings.

Key words: Infertility, Intrauterine, Insemination cycles.

P-32

Effect of heparin in treatment of recurrent IVF – ET – failure

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Introduction: Recently inherited or acquired trombophilia is known as one of the factors of IVF failure. Trombophilia mechanism to create recurrent IVF - ET - failure is such as mechanism Trombophilia in recurrent abortion. In this study will review the effects of heparin therapy in recurrent IVF - ET - Failure.

Materials and Methods: This study was clinical trial study and 86 infertile couples referred to Yazd infertility clinic and have a history of 3 or more than 3 times the previous IVF failure have to consider. Patients enter to this study based on inclusion criteria (3 or more previous IVF failure, women age 19-35 years, BMI = 19-29 Kg/m², the presence of both ovaries, FSH <10 IU/l, good quality embryo, endometrial thickness of 8-14 mm) and exclusion criteria (women with PCOS, Hydrosalpinx, endometriosis, and uterine Abnormality and women who have already used heparin, heparin consumption of contraindication , chronic diseases such as thyroid, liver, kidneys, thrombocytopenia). After explain of patient and get consent letters, they are divided into two groups based on random tables. For both groups

are measured the third day of FSH, anti cardiolipin antibody, Anti - TPO, TSH, Protein C, S and mutation of factor 2 and 5 Leiden and MTHFR, serum prolactin .Then both groups are treated with Long cycle treatment protocol.In the day of embryo transfer Case group receive heparin 5000 U/Bid SQ and control group will not be receive drug. In both groups will inject progesterone 100mg /d. Pregnancy test (BHCG) will be done 14 days after embryo transfer. If pregnancy test become positive will be done ultrasound 2 weeks later for diagnosis of clinical pregnancy .For analysis of data we will use of SPSS software and Chi Square test and Fisher exact test, T-Test and Nonparametric tests.

Results and Conclusion: This study is in progress.

Key words: Heparin, IVF, Progesterone.

P-33

Knowledge and attitude of medical and paramedical group on fertility preservation

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Introduction: Technological developments in tissue and gamete cryopreservation (along with ART) have provided chance of fertility not only to sub – fertile couples, but to those young men and women whose cancer treatment, radiotherapy or chemotherapy may prevent their fertility in future. Therefore it is importance for everyone to be aware of the current fertility preservation method. Surveying the knowledge and attitude of medical and paramedical group on fertility preservation methods was the main purpose of this research.

Materials and Methods: The current descriptive research was done in summer 2009 in Mashhad. 190 subjects (including 30 gynecologists, 34 general practitioners, 88 midwives and 38 nurses) who were employed in different hospital of Mashhad, completed the related questionnaire and participated as sample group in this research. Results of the study have been reported by the use of K.Square test based on frequency and percentage.

Results: The study showed %88.9 of subject had low to moderate information about different methods of fertility preservation. %92.1 recommended low to moderate application of these methods. Lack of enough information in this field was the main reason which all the participants were agreed on.

Conclusion: Due to the importance of fertility preservation methods in some cases with cancers, impotence diseases, belated marriages and etc. ,it is quite necessary that personnel working in medical environment do learn these methods and teach them to patients and those who advantage their application.

Key words: Fertility, ART, Cancer.

P-34

Low dose gonadotropines in PCO

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Introduction: Infertility is considered as social problem in different societies like our country, Iran. Among treatable causes of infertility, ovary diseases such as poly cystic ovary syndrome can be mentioned which is the main cause of infertility due to an ovulation. Customarily, clomiphene citrate is regarded as the first line of intrusion in ovulation induction in these patients. In patients resistant to clomiphene, using human gonadotropins (HMG) is recommended as a specific treatment alternative or the next step to induce ovulation. The aim of treatment is to release one ovule in each cycle. It is effective in normal amount of gonadotropin, however, results in high probability of multiple pregnancy and ovarian hyper Stimulation syndrome. In this study, impacts of ovulation stimulation with low – dose step – up gonadotropin and sequential treatment with clomiphene citrate and gonadotropin on PCOS patients who are resistant to clomiphene citrate have been studied.

Materials and Methods: 84 PCOS patients resistant to clomiphene citrate were selected. They were put into two groups randomly, one of which were treated with low-dose step-up gonadotropin and the other with clomiphene citrate and normal dose gonadotropin. Patients were controlled by vaginal sonography during the induction and range of pregnancy, single- follicular cycle, ovarian hyper stimulations syndrome, multiple pregnancy and cases of cycle cancellation and poor responses were compared cancellation and poor responses were compared in two groups.

Results: In the group treated with low-dose step-up gonadotropin, probability of pregnancy and single-follicular cycles was higher and probability of multiple pregnancies was lower than the group treated with normal dose gonadotropin. The

difference was not significant. Moreover, OHSS was significantly lower in the group with low-dose. The amount of injection used and length of treatment was lower in group treated with normal dose. The mean of cases of cycle cancellation and poor responses had no significant difference in two groups.

Conclusion: Although the amount of injections and length of treatment was more in the group treated with low-dose step-up gonadotropin, we could manage to achieve higher probability of pregnancy and lesser side effects such as OHSS and multiple pregnancies. Therefore, this method can be used as the first therapeutic step in PCOS patients resistant to clomiphene.

Key words: Ovulation Induction, Poly Cystic Ovary Syndrome, Gonadotropin.

P-35

What is the relationship between blood group and pregnancy rate after laparoscopic ovarian diathermy?

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Introduction: PCOS is the most common endocrinopathic and reproductive disorders in women. The pathogenesis of PCOS is still controversial. There has long been an association of abnormal gonadotropin secretion with this syndrome. Hyperandrogenemia is principally ovarian in origin although the adrenal gland may contribute. During reproductive age, PCOS is associated with relevant reproductive morbidity including menstrual irregularity, anovulation, infertility, increased pregnancy loss, and complications of pregnancy. The goal of this research is the relationship between kinds of blood group and pregnancy rate after LOD.

Materials and Methods: This prospective clinical research evaluates the multiple influential factors on LOD outcomes, in 148 infertile PCOS women, admitted in Pamanieh Hospital of Jahrom, during 3 years. After evaluation of semen analysis, and ruled out other causes of hyperandrogenemia, Metformine and Clomiphene were prescribed for 3 months, if no response, HSG was performed for detection of tubal patency, then gonadotropins were added to previous drugs. The data were analyzed with SPSS software. LOD was end goal to reduce the amount of androgen-producing tissue. From 148 ladies the blood groups were as follow: 51 (34.45%) O+, 39 (26.35%) B+, 37

(25%) A+. From 148 patients, 80 (54.05%) patients were not conceived, but 68 (45.94%) ladies were pregnant, that blood group of them were evaluated: 27 (39.70%) O+, 19 (27.94%) B+, 12 (17.64%) A+, 5 (7.3%) B⁻, 4 (5.88%) AB⁺, and 1 (1.47%) A⁻. The blood groups of 80 nonpregnant patients were: 24 (30%) O+, 20 (25%) B+, 25 (31.25%) A+, 2 (2.5%) B⁻, 4 (5%) AB⁺, 2 (2.5%) A⁻, and 3 (3.75%) O⁻. None of pregnant and nonpregnant ladies had AB⁻ blood groups.

Results: From 148 PCOS ladies, 68 (45.94%) conceived, but 80 (54.05%) ladies weren't pregnant. The most common blood groups in pregnant women were 39.70% O+ and then 27.94% B+, and 17.64% A+. But in nonpregnant groups these rates were: 31.25% A+, 30% O+, and 25% B+. The evidence of blood group in society is in order to: O+, A+, B+, and AB+. In our research, the most common group is O+ in pregnant ladies that are the same common type of society. But the second type of blood is B+; despite the second type in society is A+ that in our static is in third group. So, our different static is in second group in pregnant woman. But in nonpregnant ladies, are the most common group A+, and second type O+. Finally blood group B+ is after blood group O+ in pregnant women.

Conclusion: Blood group haven't significant correlation subsequent LOD, in which women had conception.

Key words: Blood group, PCOS, LOD, Infertility.

P-36

A comparison of histopathological findings of ovarian tissue inadvertently excised with endometrioma and other kinds of benign ovarian cyst in patients undergoing laparoscopy versus laparotomy

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Introduction: To evaluate ovarian tissue inadvertently excised with benign cysts during laparotomy or laparoscopy.

Materials and Methods: Prospective study. Setting: Private and university hospitals. Patients: 260 women, 20 to 35 years old, with unilateral benign ovarian cysts. Interventions: One hundred fifty women operated by laparoscopic cystectomy stripping technique, and 110 women operated by laparotomy with the same technique. Main outcome measures: Histopathologic findings of

ovarian tissue inadvertently excised in endometrioma compared with other kinds of benign cysts in laparoscopy versus laparotomy.

Results: In the laparoscopy group, ovarian tissue was present in 65% of endometrioma and in 32% of nonendometriotic cysts. In the laparotomy group, ovarian tissue was seen in 80% of endometrioma and 41% of nonendometriotic cysts.

Conclusion: The surgical approach had no statistically significant impact on conservation of ovarian reserves. The nature of the ovarian cyst played a greater role in the quality and quantity of the excised ovarian tissue.

Key words: Laparoscopy, Histopathologic, Ovarian tissue.

P-37

Association between antiphospholipid antibodies, gestational age and post abortion duration in women with recurrent abortion

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Introduction: Aim of this study was comparison of anti phospholipid antibodies in women with recurrent pregnancy Loss based on gestational age and past duration of abortions.

Materials and Methods: We performed a case-control study on 250 pregnant and none pregnant women. The pregnant women who had history of spontaneous recurrent abortion as case group and none pregnant healthy women as control group were chosen. Case group were divided to three sub group based on numbers, gestational age and past duration of abortions. Antiphospholipid and anticardiolipin antibodies were measured in their serum by Enzyme linked immunoassay with Orgenec kits. Data were analyzed by SPSS soft ware version 13 and statistical tests.

Results: Mean age of women was 24-39 years old and 197 women in case group and 50 women in control group were studied. In case group whatever number of abortion increased, mean of antiphospholipid antibodies increased and differences was significant. The relation between mean of antiphospholipid antibodies and increase of gestational age of abortion was not significant but there was significant relation between mean of anticardiolipin antibodies and increase of gestational age in first abortion. Mean of antiphospholipid antibodies in women with lower than 5 years past after the third abortions was twice

than whom greater than 5 years past after the third abortions.

Conclusion: Antiphospholipid antibodies based on number of abortions and gestational age of abortions were increased but anticardiolipin antibodies just increased in relation gestational age of first abortion.

Key words: Antiphospholipids antibodies, Anticardiolipin Antibodies, Recurrent abortion.

P-38

Determination of the risk factors of macrosomia neonatal birth, regarding gestational diabetes

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Introduction: Macrosomia defined as infant birth weight over 4-4.5 kilogram or 90 or higher percentile of weight for age. Prevalence of macrosomia is equal to 10% in all pregnancies in united stated. This study conducted to determinates the neonatal macrosomia predictors in Shiraz.

Materials and Methods: This case control study carry out on 420 infants that borne in Shiraz hospitals. Data analyzed with univariate method by t-test and fisher exact test and logistic regression multivariate models after gathering by questionnaire.

Results: In univariate method mother age, diastolic blood pressure and BMI showed a significant relationship with macrosomic neonatal birth. Also GD, macrosomia and cesarean history, preeclampsia, hydramnios, glocosuria in second and third trimester, diabetes disease and cesarean delivery related to macrosomic birth. But the most important factors in regression model were GD history (OR=20.06), macrosomic birth history (OR=10.52) and preeclampsia in pregnancy period (OR=4.86), respectively.

Conclusion: With regard to this study results, mothers with macrosomic birth and GD history and preeclapmsia are at risk for delivering macrosomic neonatal. So in order to preventive of macrosomic side effects, adoption of weight taking in pregnancy period advised.

Key words: Macrosomia, Neonatal, Risk factors, Gestational diabetes (GD), Shiraz.

P-39

Female genital tuberculosis and infertility

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Introduction: This study was performed to evaluate the rate of diagnosed female genital tuberculosis and its presentational symptoms and methods of diagnosis.

Materials and Methods: A total of 3088 cases of tuberculosis (TB) who had been registered and treated in the Health Center of Fars Province from 1989 to 1999 were retrospectively studied. From this group, 46 women were diagnosed as having genital TB. The diagnosis in 41 cases was based on the standard pathological criteria of tissue specimens. The other five cases were excluded from this study due to the lack of classical diagnostic criteria. Statistical analysis was performed using the Z-test.

Results: The mean age of the patients at the time of diagnosis was 30.4 years. Seven patients presented with abdominal or pelvic pain (17.07%). In this group three cases underwent laparotomy due to abdominal mass and four patients for tubo-ovarian abscess, which led to the diagnosis. Abnormal uterine bleeding was the cause of diagnostic dilatation and curettage in three other patients (7.31%). However, in 31 cases (75.6%) TB was diagnosed during studies performed to evaluate the cause of their infertility, and the most common diagnostic procedure was endometrial curettage (25 cases). Female genital TB accounted for 1.32% of all tuberculous patients in this study. Of these, 75.6% were infertile by definition ($Z=12.13$, $p<0.0001$). TB endometritis was detected in 72.03%, tubal involvement in 34.03%, ovarian TB in 12.9% and cervical TB in 2.4% of the patients.

Conclusion: This study confirms the presence of a strong relationship between genital TB and infertility; therefore genital TB would be more frequently diagnosed if this possibility was considered in the evaluation of every infertile patient in areas where tuberculosis is endemic.

Key words: Female, Genital tuberculosis, Infertility.

P-40

Impact of endometrioma on ovarian stimulation outcomes during Intra Cytoplasmic Sperm Injection (ICSI) cycles

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Introduction: Our objective was to evaluate the effect of ovarian endometrioma on ovarian stimulation outcomes in Intra Cytoplasmic Sperm Injection (ICSI).

Materials and Methods: In this prospective cohort study, we followed 75 patients underwent ICSI procedures at Royan Institute during 10 month. The study group consisted of 32 women who had endometrioma with size more than 1 cm. The control group included 43 patients with male-factor infertility. The standard long protocol with gonadotropin-releasing hormone agonist (GnRH-a) and recombinant follicle stimulating hormone (rFSH) was used for ovarian stimulation. Two groups were compared for number of oocytes retrieved, oocytes grades, embryo quantity and quality. We also performed inter group comparison in patients with unilateral endometrioma.

Results: There were no significant differences about basal characteristics between endometrioma and control groups. Our results also showed similar endometrial thickness, follicle numbers, and embryo grade in compared groups.

However, patients with endometrioma had higher gonadotropin consumption compared with control group. The mean number of retrieved oocytes in patients with endometrioma was 7.84 ± 4.03 compared with control group 11.25 ± 5.25 ($p=0.003$). The numbers of metaphase II oocytes were also significantly lower in patients with endometrioma (5.84 ± 3.9 vs. 8.85 ± 5.3).

In patients with unilateral endometrioma, we could not find any significant differences about main outcome measures between normal ovary and involved ovary with endometrioma.

Conclusion: It seems that ovarian endometrioma affects ovarian response in stimulation phase by decreasing the numbers of retrieved oocytes but not affecting quantity and quality of embryos.

Key words: ICSI, Ovarian endometrioma, Number of oocytes, Embryo quality.

P-41

Clomiphene citrate and dexamethazone in treatment of polycystic ovary syndrome and infertility

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Introduction: This study was conducted to evaluate the effect of dexamethazone and clomiphene citrate in treatment of polycystic ovary syndrome (PCOS) and infertility.

Materials and Methods: In this clinical trial study 120 infertile women with PCOS were randomly selected into two groups. Groups 1 were treated with Clomiphene citrate 100 Mg/day that was given from day 5 to day 9 of the cycle and DEX 2 mg/day from day 5 to Day 14 of the cycle. Group 2 were treated with placebo that was given from day 5 to day 14 of the cycle. The goal of the study was ovulation and pregnancy.

Results: There were no significant differences between groups in age, duration of infertility, BMI, menstrual pattern, hirsutism and serum DHEAS. The mean number of follicles >18 mm was significantly higher in the DEX and clomiphene group than in the placebo group ($p < 0.05$). In this study there were significantly higher rates of ovulation and pregnancy in the DEX and clomiphene group.

Conclusion: Using DEX and clomiphene in treatment infertile women with PCOS is significantly efficient in induction of ovulation and pregnancy.

Key words: Clomiphene citrate, Dexamethazone, Infertility, Polycystic ovary syndrome.

P-42

Comparative study of aromatase inhibitor (Letrozole) with clomiphene citrate as the first line treatment of patients with PCO

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Introduction: The purpose of this study was to determine the efficacy of Letrozole on ovulation induction in comparison with clomiphene citrate in PCO patients.

Study design: The study was based on prospective randomized clinical trial comparing the efficacy of letrozole as the first line management of PCO patients in comparison to clomiphene citrate.

Materials and Methods: The study included 101 patients dividing to rather equal groups. This quasi experimental study was conducted during at least a 3 month period aiming the pregnancy.

Results: Pregnancy occurred in 29 of 50 patients in letrozole group (58%) and 24 of 51 patients in clomiphene group. 7 patients in letrozole group showed regular menses after treatment course with no significant difference between the 2 groups, ($p=0.39$).

Conclusion: Our findings suggest that letrozole and clomiphene citrate is equally effective for induction of ovulation and achieving pregnancy in patients with PCO.

Key words: Letrozole, Clomiphene citrate, Infertility, PCO.

P-43

Use of ethinyl estradiol to reverse the antiestrogenic effects of clomiphene citrate

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Introduction: Approximately 40% of subfertile women have disorders of ovulation. Polycystic ovary syndrome is the most common cause of anovulation accounting over 70% of cases. Clomiphene citrate (CC) is successful inducing ovulation in 50-70% of causes but the number of pregnancies achieved after ovulation induction is much lower than expected. This discrepancy has attributed to a negative action of CC in the form of prolonged antiestrogenic effects on endometrial receptivity and cervical mucus. Moreover some authors demonstrated that CC interferes with uterine blood flow. In an effort to avoid this negative effect, ethinyl estradiol (E2) can be given inadequate dosage. The aim of this study is to compare endometrial thickness, uterine blood flow, follicular numbers and hormonal levels in two groups who received clomiphene in combination with E2 and clomiphene in combination with placebo.

Materials and Methods: A total of 42 women aged 20 to 35 years with infertility of at least two years duration and oligomenorrhea or amenorrhea associated with a positive menstrual response to progesterone challenge randomized to treatment with CC (100mg daily for 5 days from 5th to 9th of the cycle) plus E2 (0.05mg daily for 5 days from 9th to 14th of the cycle) group I, and CC plus placebo (from day 9th to 14th of the cycle) group II. Uterine artery Doppler indices, number of pre-ovulatory follicles, endometrial thickness and serum hormonal levels were measured at days 5, 12 and 15 of menstrual cycles. Physicians who did transvaginal ultrasound and personnel who

measured the hormonal levels were blinded to treatment protocol. Randomization was done by pharmacist.

Results: Both treatment regimens significantly decreased hormonal levels of testosterone and prolactin, mean level of FSH, TSH, and DHEAS was not significantly changed. Mean level of 17 β E and LH significantly increased in both groups. There was a statistically significant difference in endometrial thickness between two groups (The mean endometrial thickness of group I in day 5:3.8 and in day 15:10.57 in comparison to group II with mean endometrial thickness in day 5:3.4 and in day 15:7.5, $p=0.000$). Also no significant difference was noted in the number of preovulatory follicles. The pregnancy rate was higher in group I (43%) than group II (14%) with $p\text{-value}=0.04$. In case group mean value of PI and RI on the day 15 of menstrual cycle (after estradiol administration) were 2.32 and 0.84 respectively in comparison to 2.70 and 0.88 respects in control group, ($p>0.05$) that was not statistically significant. Also no significant statistical difference was detected between PI or RI of day 5, 12 in the two groups as expected.

Conclusion: Ethinyl estradiol may improve the antiestrogenic effects of CC on endometrial thickness, which may contribute to high pregnancy rates. No correlation is noted between higher 17 β E2 ($>60\text{pg/ml}$) levels and PI or Results.

Key words: Clomiphene Citrate, Ethinyl estradiol, Pregnancy.

P-44

Hirsutism and infertility

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Introduction: Hirsutism is the growth of long, coarse hair on the face and body of women in a pattern similar to that found in men. It may also signal the presence of hormone imbalance and associated with a variety of other symptoms such as PCO and irregular ovulation leading to infertility.

Materials and Methods: To evaluate the clinical signs and hormonal changes in women who complained of increased hair growth we studied 195 female aged 22-30 years. Increased body hair was graded using the Ferriman-Gallwey (F-G) method. Hirsutism was defined when the F-G score was ≥ 8 .

Results: Hirsutism was present in 60-66% females and in 39.34% no hirsutism was noted. The females with hirsutism complained more frequently of infertility ($p=0.05$) which the most common cause were PCO (89%). The female with hirsutism who complained PCO had higher LH/FSH ratio ($p=0.01$), and significantly higher levels of testosterone and dehydroepiandrosterone sulfate ($p=0.05$) higher values of free androgen index ($p=0.001$) and significantly lower levels of sex hormone-binding globulin ($p=0.01$), increased greasiness of skin ($p=0.05$) and noted the progressing increases of hair growth ($p=0.05$), and significantly higher body mass index. No differences in frequency of menstrual disorders and acne were found.

Conclusion: The significantly higher levels of testosterone and dehydroepiandrosterone sulfate, higher values of free androgen index and lower levels of sex hormone binding globulin ($p<0.01$) were found in females with hirsutism who complained PCO, therefore it should be excluded in all women presenting with hirsutism. The females with PCO complained more frequently of infertility, increased greasiness of skin, had higher body mass index.

Key words: Hirsutism, Testosterone, Dehydroepiandrosterone sulfate.

P-45

Persistent trophoblastic disease after clomid therapy

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Introduction: Poor consequence after some ovulation induction therapies are apparently discussed in many literatures and needs special precaution.

Moreover, there are some reports on association between clomid therapy and hydatid form molar pregnancy however there is not a valid estimate of the related incidence. In this case report we will present another case in this regards.

Materials and Methods: A 28-year-old patient gravida 0, after 6 years infertility, received clomiphene citrate and resulted in a positive pregnancy test after 3 months. After 8 weeks of

pregnancy she developed vaginal bleeding so due to incomplete abortion, curettage was done for her.

Results: Pathologic evaluation of the specimen was in favor of molar pregnancy. She was on OCP and serial β HCG titer showed decreasing pattern two months, both then increased and a vaginal sonography demonstrated an invasion of gestational trophoblastic disease to myometrium. Chest X- ray was normal and a computed tomography of abdomen, pelvis, and brain was normal with no evidence of metastasis.

Conclusion: She improved after a course of chemotherapy and β HCG titer dropped to a negative level in the follow up.

Key words: Clomid therapy, Infertility, Trophoblastic.

P-46

Do the reasons of infertility affect the pregnancy rate of IUI

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Introduction: Survey the pregnancy rate and its relation with the reason of infertility in couples who were undergone IUI treatment.

Materials and Methods: This cross-sectional and analytical study was performed on 500 infertile couples that had undergone IUI treatment in Mehregan and Fatemehzahra Infertility Center University of medical sciences in Babol during 2006-2008.

The cause of infertility was divided to three groups; female factor, male factor and unexplained factor. The necessary data were collected by SPSS (12) and then analyzed with chi-square test and T-test with $p < 0.05$.

Results: In this study the pregnancy rate was 19.6%. In pregnant women the mean age (25.4 ± 4.9 years) was lower than non pregnant ones ($p = 0.004$). Pregnancy rate in primary and secondary infertility were in 18.3% and 24.7% respectively. Pregnancy rate was seen in 20.1% of female factors, 20.2% of male factors, 12.4% in both female and male factor and 23.7% in unexplained factor.

Conclusion: The case of infertility doesn't have influence on successes rate of the treatment by IUI but it is related to the age and duration of infertility in women.

Key words: IUI, Pregnancy rate, Infertility.

2-Embryology, Genetics, Stem cell

P-47

The presence or absence of a cytoplasmic halo had effect on day 2 embryo quality

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Introduction: A good selection of embryos and prediction of implantation is probably the most important issue in assisted reproduction. Various embryo scoring system have been described depended on the shape, size and amount of the blastomeres. In recent years, there has been growing interest in the assessment of pronuclear morphology to select the most viable and competent embryos. Alignment, size, number, equality distribution of nucleoli, cytoplasmic heterogeneity and presence or absence of cytoplasmic halos (cytocortex) that notified in Pronuclear zygote morphology, has gained much attention recently due to its positive value in predicting embryo quality ,implantation and pregnancy, particularly in pronuclear stage transfers .

Materials and Methods: This was a prospective study that evaluate the role of halos in embryo quality. A total of 1392 zygotes from 332 ART cycles were investigated in the Yazd Research and Clinical Center for Infertility from March 2008 to March 2009. At about 16-18h after insemination, oocytes were examined for the presence of pronuclei and polar bodies. Each pronucleated oocyte was assessed individually for the presence or absence of a cytoplasmic halo. The morphology of an embryo was noted 48h (day2) after insemination. The embryos grade A-D according to degree of cytoplasm fragmentation and the number of blastomeres was scored.

Results: The presence or absence of a cytoplasmic halo was correlated with grades of embryos. Total of 975 (70.1 %) zygotes was included in group of zygotes with halo positive effect and 417 (29.9%) in group of zygotes without cytoplasmic halo. The comparison of a grade A, B, C and D day 2 embryos and presence or absence of a cytoplasmic halo was evaluated. Majority of A and B grade embryos were positive halos and majority of C and D grade were negative halos.

Conclusion: The presence or absence of a halo had significant effect on the quality of embryo. The absence of a halo also resulted in slow

development, poor quality and increased fragmentation. The halo score in combination with day 2 embryo morphology is useful in determining the most suitable number of embryos for transfer, and achieving the optimal chance of conception.

Key words: Pronuclear morphology, Embryo quality, cytoplasmic halo, Assisted reproduction.

P-48

Endocrine function of estrous cyclicity and follicular dynamics in neonate vitrified ovarian grafts after treatment of the ovariectomized host with melatonin

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Introduction: The effect of melatonin treatment on neonate mouse ovarian tissue after vitrification, thawing and heterotopic transplantation into ovariectomized host mice was studied.

Materials and Methods: Vitrified ovaries from neonate F1 hybrid mice, candidates for transplantation to treated or untreated groups, were thawed under standard conditions with or without the addition of 100 µM melatonin, respectively. Following transplantation, melatonin (20mg/kg/day) or saline solution was injected i.p. to the treated and the no treated groups respectively. Melatonin, gonadotropins and steroids concentrations, together with follicle survival and development were followed. Also, vaginal cytology was carried out to monitor estrogenic activity of ovariectomized recipient mice.

Results: Histological and immunohistochemical studies showed that melatonin could improve the follicle mass quality in the ovarian graft. But, the restoration of fertile estrous was similar between remedy and control groups. Plasma LH and FSH

levels were higher in the ovariectomized host than intact mice at before restoring ovary graft cyclicity. However, the melatonin administration reduced these high levels into nearly similar concentrations to those in intact mice. The correlation coefficients between gonadotropins and melatonin concentrations at the different stages of the estrous cycle were significantly different from zero. Nevertheless, estradiol and progesterone secretions were not adversely affected by melatonin treatment. But the correlation coefficients were significantly different from zero.

Conclusion: These results suggest that melatonin could be beneficial as a protection from graft ovarian tissue as well as have positive effects on the deficient the activity of hypothalamic–pituitary–ovarian axis drive of the recipient.

Key words: Melatonin, Ovarian, Estrous cyclicity, Follicular dynamics.

P-49

The effect of hypervitaminosis in the embryonic period and effects of spermatogenesis in mature period of male Rat

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Introduction: In 1915, vitamin A was recognized as an essential compound for development and life. With the name of this vitamin, different materials with the same act and much closed chemical compositions are categorized which usually found in animal tissue. Retinoic Acid (RA) is a normal morphogene that it synthesis from Retinol. But in some cases, even the compounds which interfere in normal development can be teratogenic in the most consumptions. This research is done in order to study of histological changes in testis and spermatogenesis in male Rats which treated with hyper dose vitamin A (all trans Retinoic acid) in the embryonic period.

Materials and Methods: After determining pregnancy, pregnant animals divided into 5 groups, randomly. Experimental groups 1, 2, 3, on gestational days 8.5, 10.5, 12.5 and 14.5, injected by 10, 20 and 30 mg/kg Retinoic acid as

intraperitoneal. Then animals do child birth. On time of maturity (10 weeks) the reproductive organs were separated. Histological changes was studied in testes among experimental and control groups.

The results were evaluated by using one way Anova and Tukey test.

Results: Results showed that cellular regularity in control group is decreased in experimental groups gradually and arrangement the spermatogen different cells which were from radial column, in experimental groups, cells exist into the seminiferous tubules had the less arrangement. Also cells with abnormal nucleus observed into the seminiferous tubules too. There are spermatides in the center of tubules which didn't development, and sperms with abnormal morphology and some cases with long and without curve nucleus. On the other hand, in present study, there was significant decrease between control and experimental groups, as a results of counting the present sperms in the epididymis and feeling shows that it is a good witness to confirm the result of histological surveys.

Conclusion: It seems, the result of retinoic acid were effective on the normal process of spermatogenesis in the stage of spherical spermatid conversion to the complete sperm and cause to increase in the number of nondevelopmental spermatid or increase of abnormal sperms. Therefore consumption of Vitamin A derivations should be under the medic's order. It is better to describe the exact usable dose during the pregnancy and have more survey to define appropriate pattern for more confidence advising to pregnant women.

Key words: Hypervitaminosis, Embryonic, Spermatogenesis.

P-50

ICSI success rates according to treatment protocols and number of eggs retrieved

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Introduction: The aim of this study was to evaluate the effect of the number of oocytes which were retrieved on the outcome of assisted reproduction.

Materials and Methods: Infertile couples who referred to Vali-e-Asr hospital for ICSI between years "2006-2008" were evaluated, prospectively. The data were grouped by the number of oocytes retrieved: oocyte yield (low, intermediate and high).

Necessary data which include age, history of obstetrics and surgery, number of eggs retrieved and etc. were collected from the files and recorded. Finally collected data were analyzed by SPSS software.

Results: Our results showed that the mean percent of MII oocyte in high field group (60.84%) was lower than the low (79.61%) and intermediate (81%) groups ($p \leq 0.05$), but there were no significant difference in fertilization rate, cumulative score, cleavage rate and pregnancy rate.

Conclusion: According to the data obtained in the present study, the number of MII oocytes can be considered as a predictive factor in ICSI success.

Key words: Egg, pregnancy rate, ICSI.

P-51

Effect of hepatocyte growth factor, fibroblast growth factor and epidermal growth factor on in vitro mouse oocyte maturation and fertilization

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Introduction: Growth factors are known to regulate ovarian function. The objective of this study was to investigate the effects of exogenous hepatocyte growth factor (HGF), fibroblast growth factor (FGF), and epidermal growth factor (EGF) on mouse oocyte maturation and subsequent preimplantation development in vitro.

Materials and Methods: Cumulus-oocyte complexes (COC) and denude oocyte (DO) were obtained from female NMRI mice 46_48 h after administration of an i.p. injection of 5 IU pregnant mares serum gonadotropine (PMSG). COCs were released from large antral follicles and culture for 18 h in humidified atmosphere with 5% CO₂ at 37c in TCM-199 medium supplemented with 20ng/ml EGF in one medium and 20ng/ml FGF and 20ng/ml HGF in other mediums and one medium without supplement as a control. After in vitro maturation (IVM), metaphase II (MII) oocyte co-incubated with sperm for 4 h in T6 medium. For

all groups, 2PN embryos were cultured the same medium and cleaved embryo was assessed after 48 hours.

Results: EGF increased the proportion of in vitro growing (IVG) oocyte reaching metaphase II in compared with experimental group either COC or DO and control. 39% to 78% of matured oocytes fertilized after insemination. This percentage was higher in DO supplemented with 20 ng/ml EGF.

Conclusion: Exogenous EGF during IVM improved the nuclear maturation and embryo development.

Key words: Hepatocyte growth factor, Fibroblast growth factor, Epidermal growth, In vitro fertilization, In vitro maturation.

P-52

Effect of ascorbic acid on in vitro maturation and in vitro fertilization of mouse oocyte and embryo development to the blastocyst stage

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Introduction: In the past decades in vitro fertilization and its related techniques have been an appropriate method to cure infertile patients. Studies have shown that in present in vitro conditions rate and speed of embryo development, cell number, their synthetic activity and their biological competence is less than those which developed in in vivo environment. One of its major causes is generation of reactive oxygen species (ROS) in in vitro cultures that results in degrees of infertility. Ascorbic acid or vitamin C is a kind of hydrophilic antioxidants in the follicular fluid. It can scavenge oxygen metabolites from the environment. Regarding above this study conducted to evaluate different concentrations of ascorbic acid on the improvement of embryo development till the blastocyte stage.

Materials and Methods: Two pronucleous (2 PN) zygotes were obtained from female NMRI mice after administration of i.p. injection of 5 IU Pregnant Mares Serum Gonadotropin (PMSG) and subsequent human Chorionic Gonadotropin (hCG) injection. Groups of 2 PN zygotes were randomly placed in T6 + BSA 16 mg/ml medium drop without or with ascorbic acid (100, 400) and halved doses (50, 200) supplemented at 24 and 48 hours. They were cultured to the hatched blastocyst

stage, and the number of embryo in different stage was recorded under an invert microscope and compared.

Results: In this study, addition of ascorbic acid to embryo culture media promoted the development from 2 PN stage embryos to morula, blastocyst and hatched blastocyst. The addition of ascorbic acid in 50ng/ml supplemented at 24 and 48 into the culture medium increased the percentage of 2 PN mouse embryos that developed into blastocysts and hatched blastocysts, whereas in the presence of 100, 200 and 400 was not significantly higher.

Conclusion: Ascorbic acid plays an important role in the development of preimplantation embryo. It can promote embryo development.

Key words: Ascorbic acid, In vitro fertilization, Blastocyst.

P-53

Correlation between different sperm viability tests and motility

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Introduction: Various methods have been established for sperm viability assessment. In the present study we aimed at evaluating the most common sperm viability assessment methods when the motility parameter is considered.

Materials and Methods: To determine the correlation of different methods of sperm viability test, epididymal sperms were collected from cauda epididymis and vas deference of 47 adult Wister rats into 5 ml α -MEM supplemented with 2 g/l BSA. A sample was examined under light microscope for motility evaluation. Viability was determined by eosin exclusion dye (EO) test, propidium iodide (PI) exclusion test, and hypo-osmotic swelling (HOS) test. Data were analyzed with SPSS software for Windows to assess the correlations between different viability assessment methods and the sperm motility.

Results: The mean sperm density was 201.4 ± 52.8 , and the mean motility was 39.5 ± 9.4 . The viability was 45.4 ± 7.7 , 49.0 ± 10.5 and 33.7 ± 8.4 in EO, PI and HOS tests respectively. Sperm motility was highly ($p < 0.01$) correlated with EO test, followed by HOS test. PI test showed the least correlation with sperm motility.

Conclusion: Our results show that sperm viability can be determined by either of methods. However, EO method is well correlated with sperm motility

followed by HOS test. Because of a moderate correlation of HOS test with motility, HOS test as a non-toxic method of sperm viability assessment can be used in ART.

Key words: HOS, ART, Sperm viability.

P-54

The effects of local injury to the endometrium on pregnancy rate in ICSI: a randomized controlled trial

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Introduction: Local injury to the endometrium prior to controlled ovarian stimulation may considerably improve implantation rates and pregnancy outcomes in intracytoplasmic sperm injection patients. To evaluate the possibility that endometrial injury may increase uterine receptivity.

Materials and Methods: In this clinical trial analysis, we evaluated the effect of local injury in women undergoing ICSI cycle in Mehr infertility institute. All women were divided according to randomized sampling into case or control group. Local injury to the endometrium by endometrial biopsies was happened on days 20-21 of menstrual cycle before the ICSI cycle for case group. Long protocol controlled ovarian hyperstimulation (COH) was performed for all patients with infertility. The following variables were evaluated: female age, duration of infertility, cause of infertility, day 3 FSH levels, estradiol (E2) levels in the day 3 and day of hCG administration, oocyte retrieve, MII, Cleaved embryo, embryo transfer and embryo quality. Pregnancy rate was confirmed by measurement of β -hCG in serum after 14 days. After data collection, analysis carried out with T-test and chi squares test by using statistical software SPSS.16. In an effort to establish the factors associated with the success of ICSI, multivariate analysis was performed based on logistic regression. An alpha error of <0.05 was considered significant for all calculations.

Results: During this period, 110 patients were analyzed. Overall PR reported in 41/110 cycles

(37.3%). Mean age of women, duration and cause of infertility, sperm parameters, FSH and estradiol on the 3rd day of menstrual cycle, mean number of oocyte retrieval, MII, cleaved, ET and PR were not statistically significant difference between case and control group ($p>0.05$). Multiple logistic regressions showed significant effect of LH levels in the outcome of ICSI ($p>0.05$). **Conclusion:** One time local injury to endometrium of ICSI patients doesn't increase the incidence of pregnancy rate. Further studies and may be multiple local injury at different time are needed.

Key words: Pregnancy rate, ICSI, Local injury, Endometrial biopsy.

P-55

The prognostic value of ratio of serum FSH to LH in ICSI outcome

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Introduction: Findings suggest that the FSH/LH ratio may be a useful clinical predictor of the ovarian response several methods have been developed to estimate the functional or biological age of the ovary. To determine the basal FSH/LH ratio in day 3 of menstrual cycle in predicting of ICSI outcome.

Materials and Methods: This was a cross-sectional study. In this study we evaluated all infertile couples who referred to Mehr infertility institute between 2006 and 2008 for ICSI. Long protocol controlled ovarian hyperstimulation (COH) was performed for all infertile patient. All women had serum FSH and LH in the day 3 of menstrual cycle. The main outcome measured were clinical pregnancy rate (CPR) correlation to FSH /LH ratio. In an effort to establish the factors associated with the success of ICSI, multivariate analysis was performed based on logistic regression. An alpha error of <0.05 was considered significant for all calculations.

Results: During this period, 1006 patients were analyzed. Overall CPR reported in 464/1006cycles (46.1%). Mean age of women influenced on PR (30.8 ± 5.2 in pregnant versus non pregnant 32.5 ± 5.9 years) ($p<0.05$). The mean duration of infertility influenced on PR (7.2 ± 5.1 in pregnant

versus non pregnant 8.2 ± 5.6 years). The cause of infertility was significant statistically ($p < 0.05$). The mean number of oocyte retrieval, MII, cleaved, ET and PR were statistically significant difference ($p < 0.05$). The FSH: LH ratio (< 3 or ≥ 3) was statistically significant between pregnant vs. non pregnant ($p < 0.05$). Multiple logistic regressions showed significant effect of female age, cause of infertility, embryo quality, and also FSH: LH levels in the outcome of ICSI ($p > 0.05$). The ROC curve indicated no significant effect of FSH: LH ratio in the outcome of IVF/ICSI ($p > 0.05$).

Conclusion: The results of this study showed that basal serum FSH: LH could be a useful predictor of ICSI outcome.

Key words: Pregnancy rate, ICSI, Follicle stimulating hormone (FSH), Luteinizing hormone (LH), FSH: LH ratio, Ovarian stimulation, Ovarian reserve .

P-56

The effects of laser assisted hatching technique on pregnancy rates and multiple pregnancies

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Introduction: Assisted hatching (LAH) that is based on the presumption of creating artificial opening in the zona pellucida might assist the in vitro hatching process of embryos. The aim of this study was to assess in a prospective randomized manner the effects of laser- assisted hatching (LAH) on pregnancy rates and multiple pregnancies.

Materials and Methods: Nine hundred thirty two consenting women aged (≥ 35 years) were selected, all causes had primary infertility undergoing (IVF/ICSI) programs and available embryos for transfer after 3 days of culture. Control group consisted of embryos that were transfer without AH and experimental group were selected randomized with AH.

Results: The performance of LAH significantly increased implantation and clinical pregnancy rates in all patients. In the patients who were less than 35 years old, multiple pregnancy rates were significantly increased compared other groups who aged over 35 years old.

Conclusion: Laser AH improves the outcome of embryos that transferred in women with advanced age (≥ 35 years) and underwent IVF or ICSI programs.

Key words: Assisted hatching, Laser- assisted hatching, Zona pellucid, Assisted reproductive technologies.

P-57

Assessment of quality control in ART lab using human sperm motility assay (HuSMA)

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Introduction: The quality control (QC) system is used to make sure that disposable items that are used for culture of gametes and embryos are toxic-free. To maintain a high standard in our ART laboratory, all disposable items in ART lab were tested by HuSMA. HuSMA was used as a measure of QC in the ART lab.

Materials and Methods: 18 items that are commonly used in IVF lab were tested by HuSMA. Items included gloves, syringes, culture dishes, etc. HuSMA was conducted at 10, 30 minutes and 1, 2, 4 and 24 hours of incubation at room temperature. Sperm motility index (SMI) was calculated by dividing the percentage of progressive motile sperm of the test by the control at the specific time. SMI value < 0.85 was used to indicate sperm toxicity. Each test was repeated 3 times only.

Results: QC by HuSMA identified that 3 assessed items, embryo transfer (ET) glove A and B, and puncture glove A were toxic. ET glove A (SMI=0.0) and puncture glove A (SMI=0.0) were toxic after 10 minutes, but ET glove B (SMI=0.63) after 24 hours were shown to be toxic (46% progressive motile sperm compared with control=68%). Also, 2 items, puncture plate A (SMI=0.42) and sperm collection dish (SMI=0.67), were border line after 24 hours, means the results in 4 repeats were different after 24 hours (2 times toxic and 2 times nontoxic).

Conclusion: Our study showed that some items used in ART lab may be toxic and their use should be routinely discontinued as part of the QC program. To increase the efficiency of the HuSMA, this assay should be done more than once for each item.

Key words: ART, HuSMA, QC.

P-58

Study of mouse strain on superovulation

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Introduction: Superovulation, in vitro fertilization, and embryo transfer are assisted reproductive technologies (ARTs) widely used in laboratory mice. Different strains of mice have inherent genetic differences that cause them to respond differently to these technologies. Knowing how different strains will perform when used for ARTs will ensure the most efficient use of mice, time, and resources. In this study, we characterized the ability of 2 strains: Balb-C and NMARI to superovulate and fertilize in vitro.

Materials and Methods: Four to six-week-old female mice (Balb/C and NMARI) were superovulated using PMSG (7.5 IU) and HCG (7.5 IU). The resulting oocytes were fertilized in vitro in human tubal fluid medium with spermatozoa of the NMARI strain. The following day, two-cell embryos were count. Differences in response to superovulation, oocyte quality and fertilization, were observed between strains, substantiating the influence of genetic variability on ARTs.

Results: The response to the superovulation treatment varied among strains and ranged from 0 - 20 (Balb/c) to 0 - 60 (NMARI) normal oocytes per female. The mean number of two-cell embryo was 3.43 in Balb/c and 3.54 in NMARI strain.

The number oocyte and dead oocyte showed significant differences between two strains. The other items including fragmented oocyte, granular oocyte and two-cell embryo didn't show significant differences.

Conclusion: This study shows significant difference between mouse strains on Superovulation.

Key words: Superovulation, In vitro fertilization, Mouse strain.

P-59

Detection and monitoring of reactive oxygen species formation by Dichlorofluorescein in cultured preantral follicles that derived from vitrified and non-vitrified mouse ovary

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Introduction: Reactive oxygen species (ROS) is generated during the physiological function of ovarian tissue. ROS measurement appears to be a helpful tool in the initial evaluation of culture condition. Thus, the aim of this work was to perform 2', 7'-dichlorodihydrofluorescein diacetate (DCFDA) as a probe for ROS generation during the *in vitro* culture of mouse preantral follicles derived from vitrified and non-vitrified samples in the presence and absence of selenium as an antioxidant agent.

Materials and Methods: Immature mouse ovaries were vitrified with 40% ethylene glycol (V/V), 30% ficoll 70 (W/V), 1 M sucrose (EGFS40), and then 120–150 µm preantral follicles isolated mechanically from vitrified and non-vitrified samples and were cultured in TCM 199 medium supplemented with different concentrations (0, 5, and 10 ng/ml) of selenium. The amount of ROS was determined during culturing of follicles by the DCFDA fluorescent assay in two way of spectrofluorometry and in situ by confocal microscope.

Results: ROS production was increased after 24 h of culture of preantral follicles in the vitrified and non-vitrified groups ($p < 0.001$). Increases in intracellular DCFDA oxidation in response to H₂O₂ correlated with ROS production in cultured preantral follicles, whereas in the presence of selenium, ROS production was decreased after 96 h of culture ($p < 0.001$); these amounts in the vitrified samples were not different from the non-vitrified samples at the end of culture.

Conclusion: These findings demonstrated that DCFDA is much more sensitive to ROS formation and this method is reliable and efficient for evaluating the ROS production in cultured preantral follicles and selenium supplementation caused a decrease in ROS level.

Key words: Ovarian tissue, Preantral follicles, Reactive Oxygen Species, Vitrification.

P-60

Comparison between outcomes of two embryo transfer techniques in mice

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Introduction: One of the important and new outcomes of biotechnology science in recent decade is increasing the pregnancy rate of transferred embryos to the recipient animals. Furthermore concerning to application of the embryo transfer technique in the case of infertility, control of some sexual disease which lead to miscarriage or infertility, access to the effectual agents in improvement of embryo transfer technique in the mouse model is very important.

Materials and Methods: In this study two experiment group contain 50 female mice of NMRI as the embryo recipient animals were picked up. After estrous synchronization of animals in each groups, the embryo transfer surgery at the day 2.5 dpc for each group was done; Thus at the first experiment group 4 one cell stage embryos transferred bilateral to the loop of oviduct and in the second experiment group 20 one cell stage embryos transferred bilateral to the same site.

Results: The data after collection analyzed by statistical software of SPSS (ver. 13). Although the result of this study demonstrated increasing in pregnancy percent in the first experiment group (30%) beside the second group (8%) (4.92 times with χ^2 test) and showed significant increase in this field ($p < 0.01$; 95% CI: 1.5-16.5).

Conclusion: Concerning with production of free radicals in manipulated embryos, the important reason was mentioned about increasing of pregnancy percent in the first group maybe related to decrease of numbers of embryos and consequently free radicals production which change the fallopian fluid environment and embryo implantation.

Key words: One cell stage, Transfer, Mouse, Oviduct.

P-61

Comparison of birth rate in blastocyst and two cell stage embryo transfer (ET) in NMRI mice

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Introduction: ET is a critical end point in some biotechnology procedures such as transgenic, cloned or knockout animal production because of birth rate. The aim of this study was Comparison of birth rate evaluation in blastocyst and two cells ET.

Materials and Methods: 8-10 week old fertile female NMRI mice were assigned in two groups: two cell embryo recipients and blastocyst recipients (50 mice /group). Blastocyst (96 hr after hCG) and two cell embryos (46 hrs after hCG) were collected from NMRI female mice that Superovulated (HMG/hCG; 5IU/5IU; 14:00'-11:00' as 45 hrs apart) and checked for positive copulation plug. Two cell embryos in CZB medium were immediately transferred surgically to swollen part of two oviducts of pseudo pregnant recipients (5 embryo/oviduct) and blastocyst were transferred to two horn of other recipients (5 blastocyst/horn). Live birth rate per each recipient was recorded and data analyzed with SPSS v. 13.

Results: Results shown that birth rate in two cell recipients (30%) were 3.14 times higher than blastocyst recipient (12%) ($p \leq 0.05$).

Conclusion: According to previous studies fallopian fluid provides embryo synchronization conditions and prepares them for uterine horn implantation, also it changes during embryo transport through the oviduct and support the metabolic needs of the developing embryo. More over miss of embryos is less in oviductal ET comparison with uterine ET in mice. Studies shows that transfer of two cell embryos is an efficient and safe method in generating transgenic mice.

Key words: Mice, Embryo Transfer, Two Cell Embryo, Blastocyst.

P-62

Developmental consequences of mouse cryotop-vitrified oocyte and embryo using low concentrated cryoprotectants

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Introduction: The risk of multiple pregnancies often present in programs of In Vitro Fertilization (IVF) is important forces in perfecting embryo cryopreservation. On the other hand, ethical restriction and assurance of potential fertility following chemo/radio therapy have led scientists to focus on female gamete preservation. The objective of this study was optimizing vitrification protocol by using less concentrated cryoprotectants (CPAs) in order to decrease CPAs toxicity.

Materials and Methods: Mouse Metaphase-II (M-II) oocytes and four cell-stage embryos were collected. Following Partial Zona Dissection / Intra Cytoplasmic Sperm Injection (PZD/ICSI), oocytes Survival, Fertilization and Developmental Rates (SRs, FRs, DRs) were recorded after cryotop-vitrification/ warming. As well as comparing to fresh oocytes and embryos, the data obtained from experimental groups (exp.) applying 1.25, 1.0, and 0.75 Molar (M) CPAs were analyzed in comparison to those of exp. adopting 1.5 M CPAs [largely-used concentration of EthylenGlycol (EG) and Dimethylsulphoxide (DMSO)].

Results: The data of oocytes exposed to 1.25 M concentrated CPAs were in consistency with those exposed to 1.5 M and control group in terms of SR, FR and DR. As fewer concentrations were applied, the more decreased SRs, FRs and DRs were obtained from other experimental groups. The results of embryos which were exposed to 1.25 M and 1.0 M were close to those vitrified with 1.5 M and fresh embryos. The results of 0.75 M concentrated CPAs solutions were significantly lower than those of control, 1.5 M and 1.0 M treated groups.

Conclusion: CPAs limited reduction to 1.25 M and 1.0 M instead of using 1.5 M, for oocyte and embryo cryotop-vitrification procedure may be a slight adjustment.

Key words: Cryoprotection, Oocyte, Embryo.

P-63

Mouse preantral follicle vitrification versus slow freezing: morphological and molecular biological evaluation

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Introduction: Cryopreservation as a process can be divided into two methods: conventional freezing (slow freezing) and vitrification. Both the slow-freezing method with increased sucrose concentration and new vitrification techniques significantly improve the results of cryopreservation of oocytes. The recent perfection for vitrification includes the concepts of increase of cooling and warming rates using minimum volume methods and decrease of toxicity by reducing the concentration of cryoprotectants. To improve the efficiency of existing cryopreservation, we developed a practical and convenient vitrification method named cryotop vitrification, which required a less concentrated and minimum volume of vitrification solution. Hence, the survival, maturation rate and expression of apoptotic genes in isolated preantral follicles after cryotop vitrification and slow freezing were evaluated in this investigation.

Materials and Methods: This experimental study was carried out on 12-14 day-old female NMRI mice (National Medical Research Institute). Preantral follicles mechanically isolated from ovary and randomly shared to unfrozen, vitrification and slow freezing groups.

Results: Survival rate in slow freezing group was significantly lower than control and vitrification groups ($p < 0.001$). Maturation rate in control and cryotop vitrification was significantly higher than slow freezing groups ($p < 0.001$). Expression of Bcl-2 in slow freezing group was significantly lower than control and vitrification groups ($p < 0.05$). Also no significant difference was found between three groups for the expression of survivin gene. The expressions of Bax, P53, Fas and Bax/Bcl-2 genes in slow freezing group were significantly higher than control and vitrification groups ($p < 0.05$).

Conclusion: We conclude that Cryotop vitrification method is better than slow freezing for survival, maturation and expression of apoptotic genes in preantral follicles cryopreservation.

Key words: Apoptosis, Cryotop Vitrification, Mouse, Preantral follicle, Slow freezing.

P-64

Study of germ cell development in mice testis after vitrification and autograft implantation

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Introduction: Grafting of testis tissue from animals to immunodeficient mice results in complete spermatogenesis, with varying efficiency in different species. This study designed to investigate effect of vitrification on spermatogenesis after auto grafting and to investigate the effect of exogenous gonadotropins on autograft development.

Materials and Methods: Small fragments of testis tissue from mice (balb/c) (35 days of age) were vitrified and grafted under the back skin. Experimental groups received similar procedure but mice treated with recombinant bovine somatotropin (for 4 weeks 25 µg). Autograft grafts sample were analyzed by histological and immunohistochemical methods at 1, 7, 14 and 28 days post-transplantation.

Results: Our results showed that the spermatogenic differentiation occurred following grafting in control, sham and experimental groups. In experimental groups administration of exogenous gonadotropins appeared to support spermatogenesis.

In Control groups after grafting an initial loss of differentiated germ cells observed that followed by a resurgence of spermatogenesis.

In experimental groups we observed evidence of complete spermatogenesis in grafts and an increased weight of the seminal vesicles compared to sham groups that may due to releasing testosterone by autograft. Spermatogenesis occurs in sham groups with low efficiency but exogenous gonadotropin has promoter effect on spermatogenesis induction. The percentage volume of spermatids in experimental groups increased significantly. Apoptotic index in experimental groups were lower compare to controls.

Conclusion: Vitrification has no harmful effect on spermatogenesis and autograft implantation. Exogenous gonadotropin progress the spermatogenesis and spermiogenesis in vitrified and grafted testis.

Key words: Testis, Vitrification, Implantation, Spermatogenesis, Apoptosis.

P-65

Spindle and chromosome changes of mouse oocytes and embryos immediately post-warming and after incubation period

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Introduction: Oocytes are more sensitive to the cryopreservation procedure than embryos especially to the high concentration of cryoprotectants (CPAs) which might be toxic. To know the limit of lower concentration of the CPAs solution is important to find the lower concentration but to keep the high survival rate of the oocytes/embryos. The objective of this study was to assess spindle apparatus and genetic material array as procedure optimism indicator for cells vitrified by various less concentrated CPAs solutions.

Materials and Methods: Following vitrification/warming by different concentrated solutions, mouse metaphase-II oocytes and four cell-stage embryos were subjected to immunohistochemical (ICH) studies immediately post-warming and after one hour-incubation period. As well as comparing to fresh oocytes and embryos, data were analyzed in comparison to the data of experimental group (exp.) applying 15% CPAs (largely-used concentration).

Results: Oocytes spindle and chromatin normal configuration is in consistent between two exp. 1 and 2, but lower in comparison with control group. The Less concentrations were applied, the more decreased normal spindle organizations were obtained from other oocytes exp. ICH observations in embryo exp. 1, 2 and 3 were a small but significant lower than those of fresh embryos. The results of embryo exp. subjected to 7.5% concentrated CPAs solutions were significantly lower than those of control and the rest treated groups.

Conclusion: The data from the restoration normal configuration of the spindle and chromosomes made us to draw the conclusion that CPAs limited reduction to 1.25 M and 1.0 M instead of using 1.5 M, for oocyte and embryo cryotop-vitrification procedure may be a slight adjustment.

Key words: CPA, Oocyte, IVM, LIF.

P-66

Effect of vitrification on sperm parameters and apoptosis in fertile men

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Introduction: The aim of this study is evaluation of vitrification effect (without cryoprotectant) on parameters of sperm (motility, morphology, viability and count) and apoptosis after thawing in fertile men.

Materials and Methods: 17 semen samples were collected by masturbation from people who came to Clinical Center for Infertility of Yazd. Normal semen was selected according to WHO standards. Smear was provided from these samples and fixed for TUNEL staining. Some samples directly cryopreserved by cryoloop in liquid nitrogen and stored at least for 7 days. After thawing, samples were evaluated for sperm parameters. Data were compared by paired t-test and independent t-test before and after vitrification.

Results: Percentage of progressive movement was significantly decreased. Also significant decrease in viability and morphology of the sperm and increase in the rate of apoptosis was observed after vitrification. Percent of apoptosis had negatively correlate with normal parameters of spermatozoa (especially progressive motility and viability).

Conclusion: In conclusion, these results indicated that vitrification is detrimental for parameters of sperm and apoptosis rate in infertile men. However, vitrification has some advantages. It is a simple and fast method and do not need to expensive materials and instruments.

Key words: Vitrification, Sperm parameters, Apoptosis, fertile men.

P-67

Expression of heat shock protein 70 and MnSOD genes following vitrification of mouse MII oocyte with cryotop method

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Introduction: The aim of this study was to investigate the effect of two vitrification protocols on mouse MII oocytes and evaluate its effects on expression of genes heat shock protein 70 and MnSOD.

Materials and Methods: The oocytes were collected and vitrified with 10 % (v/v) EG + 10 % (v/v) DMSO + 0.5M sucrose in group A (VSI) and 14.5% (v/v) EG + 14.5% PROH + 0.5M sucrose in group B (VSII), respectively. For thawing vitrified oocytes were put into 1M sucrose for 1 min and two diluted solution for 3 min. After thawing the oocytes were fertilized and cultured in vitro to develop in two cells. Survival rate and two cell embryos were evaluated and gene expression (HSP 70, MnSOD and β actin) was examined by reverse transcription polymerase chain reaction (RT-PCR).

Results: Survival rate of mouse oocytes after warming was lower in two groups (VSI: 91.2% \pm 1.7, VSII: 89.2% \pm 1.5) compared to control (100.0% \pm 0.01). The rate of IVF were significantly ($p \leq 0.05$) reduced in vitrified-warmed (VSI: 39% \pm 5.8; VSII: 34% \pm 5.7) oocytes compared to control (88.36% \pm 2.3). We analyzed the expression of specific gene such as Hsp70, and MnSOD. The abundance of mRNA was generally reduced in oocytes related to vitrification procedures, but expression of MnSOD increased in vitrified-warmed compared to control oocytes. We also detected Hsp70 only in control and VSI group.

Conclusion: Our results demonstrated that increasing HSP 70 activity in VSI might have to the good developmental competence of vitrified oocyte.

Key words: Cryotop, Gene expression, Oocyte, Vitrification.

P-68

Sperm centrifugation can reduce oocyte fertilization rate

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Introduction: Fertilization rate after intracytoplasmic sperm injection (ICSI) was evaluated in relation to three different sperm preparation methods; 1/swim up, 2/density gradient centrifugation and 3/ swim out.

Materials and Methods: From 207 patients undergoing ICSI (with more than 6 oocytes recovery) at Montaserieh Infertility Center, totally 1962 oocytes (metaphase-II) were obtained (Oct 2007 to April 2009). Sibling oocytes were injected by husband's sperm that prepared by swim up (Group 1, No=672) density gradient centrifugation (Group 2, No=632) swim out (Group 3, No=658).

Results: In normospermic patients (WHO) there was no statistically significant difference for fertilization rate between three groups ($p > 0.05$). Fertilization rate for Group 1=63.1%, Group 2=62.7%, Group 3=65.4%. In pyospermia and semen with hypercellularity 42 from 207 patients (round cells ≥ 1 million /ml). fertilization rate was significantly higher in group 3 compared with group 1 and 2 ($p < 0.001$). Group 1=43.5% , Group 2=49.7% , Group 3= 61.6%.

Conclusion: Sperm preparation methods with centrifugation can be harmful for the sperm DNA integrity. In centrifugation sperms are compacted with free radicals which are released by leukocytes, germinal cells and dead spermatozoa. So normal sperms are influenced with free radicals. But swim out is an easy method to harvest motile and normal spermatozoa. In this method sperms are not compacted, and damage induced by free radicals is prevented. Abnormal semen, especially those with pyospermia and hypercellularity may benefit more from swim out method.

Key words: Sperm separation, Swim out, ICSI.

P-69

Transdifferentiation of the lymphocyte into cardiomyocyte

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Introduction: Nowadays, cell transplantation has drawn tremendous interest as a novel approach to improve the various cardiac disease. Various cell populations, such as embryonic stem cells, cord blood cells, and mesenchymal stem cells, have been suggested as a source for replacement therapy. With regards to the limitations of using different stem cells, transdifferentiation of the fully differentiated cells can be the other choice. In the present study, we investigated whether human peripheral blood cells could transdifferentiate into cardiomyocytes.

Materials and Methods: For this purpose, Raji cell line that is human B lymphocyte was used. Cardiomyocyte extract was prepared from adult mouse cardiomyocytes. The cells were treated with Azacytidin (1 μ g/ml for 24 hours) and trichostatin A (500ng/ml for three days). Then, the treated cells were permeabilized with streptolysin O. The cells exposed to the mouse cardiomyocyte extract for one hour. The cells were resealed by CaCl₂. The

cells were cultured for 3 weeks. Immunohistochemistry was performed for antimyosin heavy chain antibody.

Results: the results indicated that the lymphocytes express the myosin heavy chain that is marker of the cardiomyocytes. However, the cells attached loosely to the plate, their morphology did not change at least after 3 weeks.

Conclusion: The lymphocytes can transdifferentiate to the cardiomyocyte. However, no morphological changes were observed in vitro, the microenvironment in vivo may modify the cell morphology. Therefore, it needs to transplant the labeled cell to the animal models to follow their efficiency to treat the cardiac disease.

Key words: Transdifferentiation, Lymphocyte, Cardiomyocyte.

P-70

Peripheral blood insulin producing cells: revisiting new hopes for diabetes cell therapy

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Introduction: Diabetes type 1 is caused by immune reaction to insulin producing beta cells and is characterized by uncontrolled hyperglycemia. Current treatment approach for this syndrome, insulin therapy, is able to partially control blood glucose levels and there are side effects such as hypoglycemic shock. Different Cell therapy strategies are new hopes for treatment of diabetes. Islet transplantation, a human experienced successful model, demands immune suppression therapies and a vast pool of donor cells. Embryonic stem cells derived IPCs have potential malignant transformations and adult stem cells differentiate to IPCs hardly. A recent study has claimed that a unique cell population in peripheral blood is able to produce insulin, so called peripheral blood insulin producing cells (PB-IPC). Since only one group of researchers has reported such isolation, in this study we aimed to isolate these cells and confirm their ability to produce insulin.

Materials and Methods: Mononuclear cells were isolated from fresh blood using ficoll gradient density centrifugation. The isolated cells were then cultured in RPMI medium supplemented with 7

percent of fetal bovine serum (FBS). After 21 days the medium was changed and the insulin and C-peptide levels was measured before and after a 5 day interval. Cells were then tested immunocytochemically for CD45, CD34, CD117 and CD11b. RT-PCR performed to detect PDX1, NKX2-2 and NEUROD1 mRNAs.

Results: The c-peptide and insulin levels were raised after 5 days. Cells had a positive profile for CD45 and CD117 and negative pattern for CD34 and CD11b. RT-PCR revealed the presence of PDX1, NKX2-2 and NEUROD1 mRNAs.

Conclusion: Our findings showed similar results with the previous report. PB_IPCs are capable of producing insulin in vitro and can be a potential candidate for treatment of diabetes in clinic.

Key words: Peripheral blood, Insulin Producing Cell, Diabetes, Cell Therapy.

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Endothelial progenitor cells do not exhibit telomerase activity

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Introduction: Endothelial progenitor cells (EPCs) derived from bone marrow are believed to support the integrity of the vascular endothelium. The number and function of endothelial progenitor cells correlate inversely with cardiovascular risk factors. Infusion of ex vivo expanded endothelial progenitor cells augments neovascularization of tissue after ischemia and contributes to reendothelialization after endothelial injury, thereby, providing a novel therapeutic option. But these cells have shown limited replication potential. The aim of this study is to determine telomerase activity and alternative splicing variants in EPCs as a potential cause of limited replicative potentials in these cells.

Materials and Methods: EPCs were isolated using a standard cell culture assay developed by Hill *et al.* G-CSF induced peripheral blood mononuclear cells were isolated on ficoll gradient

and transferred into 6-well fibronectin coated plates. After 2 days nonadherent cells were transferred into 24-well fibronectin coated plates and after 5 days colonies were detached mechanically under vision of loop microscopy. MRNA was isolated and cDNA was synthesized and expression of telomerase variants was evaluated. Telomerase enzyme activity was assessed using telomerase repeat amplification protocol (TRAP).

Results: Cells showed excellent colonies during culture improving proper isolation of EPCs. TRAP assay showed no telomerase activity and Real Time PCR showed no telomerase enzyme mRNA.

Conclusion: EPCs do not exhibit telomerase activity and this might be the reason of limited replication potentials.

Key words: Telomerase, TRAP, EPC.

P-72

Expression of SDF-1/CXCR4/CXCR7 as angiogenic and IP-10/CXCR3 as anti-angiogenic factors in adipose-derived stem cells (ASCs) of patients with breast cancer

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Introduction: It has been demonstrated that the tumor angiogenic ability is one of the most important predictors of breast cancer progression. SDF-1/CXCR4/CXCR7 axis closely correlates with this process. It has been shown that MSCs recruited to the tumor microenvironment through CXCR4 and CXCR7 and may contribute to the production of proangiogenic factors. In contrast, IP-10/CXCR3 axis has angiostatic effects and might suppress tumor progression. This study examined the expressions of SDF-1, CXCR4, CXCR7, IP-10 and CXCR3 mRNA levels in ASCs of patients with breast cancer.

Materials and Methods: The expression of these chemokines/chemokine receptors were determined in ASCs isolated from twenty one breast cancer patients. MRNAs were extracted from ASCs and the expression of mentioned molecules was determined using real-time quantitative RT-PCR method.

Results: As a result, IP-10 had lower expression in patients compared to normal individuals. CXCR7 mRNA was expressed 3.8 folds more in patients' ASCs than those of normal individuals (p-value=0.06). There were no statistical significant different between SDF-1, CXCR4 and CXCR3 mRNAs of patients and controls. Both SDF-1 mRNA and protein and CXCR7 mRNA were expressed more in patients with stage 3 compared to stages 1 and 2. IP-10 was observed more in patients with stages 1 and 2.

Conclusion: These data suggest that the differentially expressed angiogenic and antiangiogenic factors between patients and controls or between different stages of breast cancer patients can probably change the prognosis and susceptibility of women to breast cancer. Thus, these molecules might be introduced as potential therapeutic and prognostic targets for human breast cancer.

Key words: ASCs, SDF-1, IP10, Angiogenesis, Breast cancer.

P-73

The effects of dimethyl sulfoxide on expression of neurotrophic factors by bone marrow stromal cells

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Introduction: Neurotrophic factors play an important role in differentiation of bone marrow stromal cells (BMSCs) into neuron. The objective of this work was to determine the effects of dimethyl sulfoxide (DMSO) on the expression of brain derived neurotrophic factor, nerve growth factor, ciliary neurotrophic factor, glial cell derived neurotrophic factor, NT3 and NT5 genes in BMSCs to study its potential applications in the treatment of neurodegenerative diseases.

Materials and Methods: The BMSCs obtained from the femur and tibia of adult rats were cultured several passages to obtain pure BMSCs. BMSCs were divided into 2 groups, cells treated with 5% DMSO and untreated cells as control group. For determination of the purity of the cells, BMSCs were stained with alkaline phosphatase and fibronectin antibodies. Reverse transcription polymerase chain reaction (RT-PCR) was used to study above mentioned genes expression in the BMSCs.

Results: Purity evaluating assays showed that 97% of the cells showed positive reaction. Some of the treated cells in each group also showed neuronal phenotype. According to RT-PCR results, the studied genes were expressed in both control and treatment groups without any significant differences.

Conclusion: Comparison of the effects of DMSO on the BMSCs showed that DMSO has not potential effects in expression of neurotrophic factors genes in BMSCs.

Key words: BMSCs, DMSO, In vitro, Neurotrophic factors.

P-74

Resumption of spermatogenesis following autologous transplantation of spermatogonial stem cells within gamma irradiated mouse testes

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Introduction: Spermatogenesis is a complex process involving in generation of a large of cells that eventually differentiate into sperm. The basis of this process is the spermatogonial stem cells (SSCs). Despite their importance in infertility treatments and studies, SSCs are infrequent in adult mouse testis and their proliferation is slow. Improved culture techniques, cryopreservation, and transplantation are useful tools for a better understanding of male germ cell biology and the regulatory factors of male fertility. In the present study, we examined the autograft of fresh and frozen-thawed mature mouse spermatogonial cells into azoospermia mouse model generated by gamma irradiation.

Materials and Methods: Sertoli and spermatogonial cells were isolated from adult mice testes using two step enzymatic digestion and lectin immobilization. The identity of the isolated cells was confirmed by analysis of alkaline phosphatase activity, immunocytochemistry

against oct-4 and vimentin and also transplantation of these cells to mouse model. For autologous transplantation, right testis from adult 6-8 weeks old NMRI mice was removed to obtain cell suspension. Then spermatogonial cells of the resulted colonies from right testis were transplanted into the seminiferous tubules of the other testis of the same mouse that were irradiated with 14Gy at 10 weeks of age. The SSCs were divided into 4 groups: fresh cells (control 1), fresh cells co cultured with Sertoli cell (control 2), frozen-thawed SSCs (experimental 1) and frozen-thawed SSCs co-cultured with Sertoli cells (experimental 2). The statistical significance between mean values was determined using statistical tests.

Results: Our results indicated that 8 weeks after autologous transplantation, transplanted spermatogonial cells underwent proliferation and sperm production in the recipient testes. There was a significant increase in the epididimis sperms counts following colony cells transplantation of SSCs co-cultured with Sertoli cells.

Conclusion: Co-culture system with Sertoli cells can increase in vitro colony formation of adult fresh and frozen-thawed spermatogonial cells. Autologous transplantation was resulted proliferation and sperm reproduction in the recipient testes.

Key words: Spermatogonia, Auto transplantation, Mature mouse.

P-75

Investigation of expression neurotrophic factors gene (BDNF, CNTF, GDNF, NT-3, NT-4/5, NGF) in bone-marrow-derived mesenchymal stem cells induced by retinoic acid

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Introduction: One of the most promising cellular sources for cell therapy is bone-marrow-derived mesenchymal stem cells (MSCs). Isolation and expansion of MSCs is easy and they have the capability under specific conditions to differentiate into other cell types such as adipocytes, chondrocytes and also can differentiate into neural lineages. Retinoic acid is one of the routine inducers which use to differentiate MSCs into neuronal-like phenotypes.

Neurotrophic factors play a critical role in differentiation of MSCs into neuron-like cells and promote neuronal survival and proliferation. The purpose of this paper is to evaluate the phenomenon of the expression levels of neurotrophic factors (brain derived neurotrophic factor (BDNF), ciliary neurotrophic factor (CNTF), Glial cell-derived neurotrophic factor (GDNF), Neurotrophin-3 (NT-3), Neurotrophin-4/5 (NT-4/5) and nerve growth factor (NGF)) in rat MSCs (rMSCs) and neuronal-like phenotypes derived from rMSCs induced with retinoic acid, to serve as a better tool for transplant therapy.

Materials and Methods: MSC were harvested from femur and tibia of adult rats (Wistar) and cultured in α MEM supplemented with 10% fetal bovine serum. Then divided them into two groups; control group (undifferentiated MSCs) and induced one. After that the retinoic acid (10^{-6} M) effect on induced group (at passage 5th) after induction 24h, 48h and 72h with RT-PCR was evaluated the expression of BDNF, CNTF, GDNF, NT-3, NT-4/5 and NGF genes.

Results: This result showed that nerotrophic factors express in both groups.

Conclusion: In conclusion, we have demonstrated that nerotrophic factors express in both groups.

Key words: Bone-marrow, Derived mesenchymal stem cells, Retinoic acid, Differentiation, BDNF, CNTF, GDNF, NT-3, NT-4/5, NGF.

P-76

Isolation, proliferation and differentiation of chicken bone marrow mesenchymal stem cells to osteocyte, chondrocyte and adipocyte lineages

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Introduction: There are no published studies on mesenchymal stem cell from chicken bone marrow. In this study we have tried to isolate chicken bone marrow mesenchymal stem cells and improve their ability for differentiation.

Materials and Methods: For mesenchymal stem cells culturing, the bone marrow of tibia were extracted. Cells differentiation to osteocytes, chondrocytes and adipocytes were reached with induction media. After differentiation specific

histochemical staining were done for histological analysis.

Results: The isolated cells indicated fibroblast-like morphology. Three weeks after induction, oil vacuoles in adipocytes, calcium precipitations in osteocytes, cartilage matrix in chondrocytes performed which were stained with Oil red o, Alizarin red s and Toluidien blue respectively.

Conclusion: These results suggested that chicken bone marrow isolated stem cells could differentiate to osteocyte, chondrocyte and adipocyte lineages.

Key words: Bone marrow, Mesenchymal stem cells, Differentiation, Chicken.

P-77

Mitochondrial DNA deletions in adult stem cells

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Introduction: Future medical applications of stem cell therapies include the use of cells originating from adult tissues. Accumulation of mitochondrial mutations with multiple culture passages may be a problem for cell lines derived from adult tissues. Dental pulp stem cells (DPSCs) and preapical follicle stem cells (PAFSCs) are adult stem cells that can be useful for repairing damaged and/or defective tissues. Therefore, this study investigated whether the common mitochondrial mutation was present in multiple passages of these cell lines as one example of adult stem cells.

Materials and Methods: In this study postnatal stem cells were isolated from DPSCs and PAFSCs from patients after local ethical approval and consent letter and expanded for several passages. Characterization of isolated cells was performed by immunocytochemistry and induction differentiation to osteoblastic and adipogenic lineages. After each 3 passages, expanded cells were harvested for DNA extraction and human mtDNA common deletion detection by multiplex PCR.

Results: The common deletion in cells from passages 3, 6, 9, 12, 15, 18 and 21 was investigated by PCR and gel electrophoresis to see if multiple

passages have adverse effects on this deletion. The final results will be presented in conference.

Conclusion: The use of mitochondria has proved to be an important tool in investigating stem cell properties and the potential applications of stem cell to treat mitochondrial disorders may open new strategies for the cure of these almost untreatable diseases. Accumulation of mtDNA mutations adult stem cell lines, may contribute to mitochondrial dysfunction. The authors believe this information establishes a compelling argument for the parallel development of embryonic stem cell technology in non-human primates and humans. These data will help us to determine if in vitro expansion of adult stem cells may restrict future clinical application.

Key words: Mitochondrial DNA, Adult Stem cells, Preapical follicle.

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Quantitative PCR assay of Stra8 gene expression upon embryonic stem cell differentiation

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Introduction: The aim of this study was to evaluate the expression of Stra8, the germ cell-specific gene, upon embryoid body (EB) formation from mouse embryonic stem cells (ESCs).

Materials and Methods: OCT-4 immunocytochemistry was performed to confirm the undifferentiated state of CCE mouse ESCs. As the sex of CCE mouse ESCs was not determined and we used this cell line for male germ cell induction, sex determination was done by PCR for SRY gene. In order to EB formation, ESCs were incubated for 1 day in 20% FBS in DMEM medium. For investigate the molecular pattern of gene expression, Real-Time PCR was done in ESCs and 1-day-old EB. Data analysis was done with ANOVA and Tukey posttest.

Results: The undifferentiated state of mouse ESCs was confirmed and the XY cytogenetic of this cell line was proved. The mean normalized expression of Stra8 was increased significantly in 1-day-old EB relative to ESCs.

Conclusion: The process of EB differentiation signifies a spontaneous differentiation of ESCs into

cells of all three germ layers such as putative primordial germ cells and more mature germ cells. Real-time PCR data using the germ cell-specific marker demonstrated that upon EB formation, the expression of this gene was upregulated.

Key words: Embryonic stem cell, Germ cell, *Stra8*.

P-79

Extraction of mesenchymal stem cells from umbilical cord blood and in vitro differentiation of them into hepatocytes

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Introduction: Umbilical cord blood (UCB) is a source of hematopoietic stem cells (HSC) and progenitor cells that can reconstitute the hematopoietic system in patients with malignant and nonmalignant disorders. Mesenchymal stem cell-derived from umbilical cord blood (UCB) have been differentiated to some kind of cells, such as osteoblast, adipoblast and chondroblast in vitro. This study examined the differentiation umbilical cord blood (UCB) derived stem cells to functional hepatocytes in vitro.

Materials and Methods: Stem cells were isolated from human umbilical cord blood (HUCB) by combining density gradient centrifugation with plastic adherence. Then the isolated cells were differentiated to hepatocyte like cells using medium consists of DMEM and 10% fetal bovine serum (FBS) supplemented with 20 ng/mL hepatocyte growth factor (HGF), 10 ng/mL basic fibroblast growth factor (bFGF) and 20 ng/mL oncostatin M (OSM). The medium was changed every 3 days and stored for albumin (ALB), alpha fetoprotein (AFP), alkaline phosphatase (ALP), and Urea assay.

Results: The results of this study indicated that stem cell-derived from human umbilical cord blood (HUCB) have able differentiated into hepatocyte under induction of hepatocyte growth factor (HGF) and basic fibroblast growth factor (bFGF) in vitro.

Conclusion: Stem cell-derived from human umbilical cord blood (HUCB) are a new source of cell types for cell transplantation therapy of hepatic diseases and under certain conditions these cells can differentiate into liver cells in vitro.

Key words: Stem cells, Human umbilical cord blood (HUCB), Differentiation, Hepatocyte cell.

P-80

CAMP-responsive element modulator (CREM) expression and spermatogenesis in rats treated with *Physalis alkekengi*

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Introduction: *Physalis alkekengi* has a large history of herbal use because of pharmacological characteristics. The objective of this study were to determine the effects of *Physalis alkekengi* extract on sperm parameters, hormonal levels and expression of cAMP-responsive element modulator (CREM) in adult male rats.

Materials and Methods: *Physalis alkekengi* extract was administered to 8 week-old male wistar rats for 56 consecutive days (250 mg/kg/day). Sperm parameters, hormonal levels and CREM expression were studied.

Results: Results from hormonal studies showed that, testosterone level was significantly decreased. There was an increase in the plasma concentration of LH in experimental group. However, this increase was not significant. The level of FSH was normal between two groups. Data from reverse-transcription polymerase chain reaction showed a decrease in the expression of CREM.

Conclusion: These results suggest that *Physalis alkekengi* has antifertility properties in adult male rat by decreasing spermatogenesis and CREM gene expression. So this study indicated decrease in testes weight and had an antifertility effect that demonstrated by decrease in sperm count, motility and increase in sperm abnormalities.

Key words: CREM expression, Spermatogenesis, *Physalis alkekengi*.

P-81

Studying the role of natural killer cells in recurrent spontaneous abortion with flow cytometry

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Introduction: At the time of implantation the endometrium is populated by abundant maternal leukocytes, the majority of which are large granular lymphocytes (LGL) whose cytoplasmic granules contain cytotoxic molecules. These cells are unusual in that while they stain strongly for the natural killer (NK) marker CD56, most do not express other classical NK markers such as CD16 and CD3. The aim of this study was to investigate the percentage of natural killer (NK) cells in women with recurrent spontaneous abortion (RSA) of unknown etiology.

Materials and Methods: Women with a history of recurrent pregnancy losses with unknown etiology were included in this study. Women with anatomical, hormonal, infectious and genetically causes of RSA were excluded. We compared the percentage of peripheral blood NK cells by flow cytometry in these patients with a group of fertile patients who had no history of pregnancy loss.

The procedure is mentioned below:

100 µl of peripheral blood were stained using phycoerythrin anti CD56 and fluorescein isothiocyanate (FITC)-anti CD16 and CYQ-CD3 monoclonal antibodies for identification of NK cells and was used Anti CD3/19/45 for detection of B cells and anti CD4/8/3 for detection of T helper and T cytotoxic cells. We used BD FACS Calibur flow cytometry for data analysis.

Results: The percentage of CD16+56 cells in RSA patients were 9.5% and in controls were 7.85%, CD19 in RSA patients were 13.5% and in controls were 9.5% and the ratio of CD4/CD8 in RSA patients were 2.24 and in controls were 1.56.

Conclusion: The results suggested that the higher percentage of NK cells in peripheral blood of RSA patients compared to control group may indicate the same increase in number and cytotoxicity of uterine NK cells. So we can relate the percentage of NK cells in peripheral blood to the risk of recurrent pregnancy loss.

Key words: Recurrent abortion, NK cells, Flow cytometry.

P-82

Studying the role of T regulatory cells in unexplained recurrent spontaneous abortion by flow cytometry

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Introduction: Recent evidences indicate that parts of the immunoregulation system such as CD4+CD25+ regulatory T (T_{reg}) cells, Th3 cells, Tr1 cells, regulatory NK cells and play very important roles in the maintenance of pregnancy. T_{reg} cells regulated inhibit maternal T cell fetal attack naturally. Recent studies showed that naturally occurring CD4+CD25+ regulatory/suppressor T cells (T_{reg}) regulate not only autoimmunity, but also alloreactivity. CD4+CD25+ T_{reg} cells play a critical role in peripheral tolerance, transplantation tolerance and maternal tolerance to the fetus. Successful reproduction in eutherian mammals depends on interaction between mother and fetus; the formation of an anatomical barrier between mother and fetus. CD4+CD25+ T cells inhibit the immunostimulation of conventional T cells through cell-to-cell contact or immunosuppressive cytokines such as interleukin 10 and transforming growth factor. Here, we studied the role of T_{reg} in recurrent pregnancy loss by comparing the percentage of T_{reg} cell concentration in unexplained recurrent pregnancy loss patients with normal fertile women.

Materials and Methods: Twenty women, with a median age of 28 years, who had had at least three successive miscarriages of unexplained etiology, comprised the URSA group. The diagnosis of "unexplained" abortion was made from the following guidelines to exclude any verifiable causes. Abnormalities of uterus and cervix, karyotypes of abortion couples, endocrine (luteal function defect, hyperprolactinemia, polycystic ovarian syndrome, and hyperandrogenemia) and metabolic (diabetes, insulin resistance, hyperthyroidism, and hypothyroidism) diseases were excluded. Serum samples were analyzed for FSH, LH, E2, PRL, T, free triiodothyronine, free (unbound) thyroxine, TSH, thyroglobulin antibody, serum glucose, insulin, thrombin, lupus anticoagulant, anticardiolipin antibodies, antinuclear antibodies, thrombophilia. We compared the concentration of T_{reg} cells in peripheral blood of these patients until 20 fertile portions with any history of recurrent pregnancy loss. The procedure was done as below: Venous blood was dispensed into two tubes, then FITC-conjugated anti-CD4 and PE-conjugated anti-CD25 antibodies were added to one tube, and FITC- and PE-conjugated IgG antibodies were added to another tube. After incubation and lysis buffer at room temperature in the dark, then centrifuged, and the supernatants were aspirated. The samples were washed twice with phosphate-

buffered saline, the cell pellets were resuspended in fixation buffer, and the cells were analyzed by a FACS Calibur system (Becton Dickinson,) using Cell Quest software.

Results: The proportion of CD4⁺T cells and CD25⁺ T cells in peripheral blood from URSA patients were decreased significantly. The proportion of CD4⁺CD25⁺ T cells was significantly higher in successfully pregnant women than URSA patients

Conclusion: Inhibition of the immunostimulation of conventional T cells can decrease the percentage of CD4⁺CD25⁺ regulatory T cells in peripheral blood, therefore CD4⁺CD25⁺ regulatory T cells may serve as a novel biomarker for monitoring in URSA patients.

Key words: Recurrent abortion, Regulatory T cells (T_{reg}) pregnancy, CD4 + CD25⁺ marker.

P-83

Lectin reactivity of mature rat uterine surface glycoconjugates to different doses of PMSG in implantation period

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Introduction: Anovulatory cycles are one of the routine female factors that lead to infertility. Hyper stimulation with exogenous gonadotropins is used for treatment of this type of infertility. Molecular organization of the uterus such as glycoconjugates is so important in implantation phenomena. Is it possible that glycoconjugates alter during exogenous gonadotropins administration? So the objectives of this project were designed to study the alteration of glycoconjugates on uterine epithelial cells (Golgi zone, apical zone, basement membrane), and uterine glands after hyper stimulation with different doses of PMSG (4, 8, 16, 24 and 40 IU) during the implantation period.

Materials and Methods: In experimental groups, the different doses of PMSG and in control group distilled water were injected. The injections were preceded by 10 IU HCG administration 48 hours later and females brings to mating. The pregnant rats were scarified at 5.5 day of pregnancy (time of implantation). Lectin histochemistry was done on the pregnant uterus with the use of WGA, DBA, PNA, ConA, SBA and UEA. The intensity of the reactions was analyzed statistically.

Results: The data showed that administration of 4IU of PMSG had no effect on uterine

glycoconjugates, 8IU of PMSG had the less effect on the Golgi zone, apical and basement membrane glycoconjugates of uterine epithelium and 40 IU of PMSG had the less effect on the alteration of uterine gland glycoconjugates compare to the control group. We also observed that 24 IU of PMSG was the most effective dose that alternated the uterine glycoconjugates.

Conclusion: Failure of IVF cycles in women who hyper stimulated with gonadotropins before the IVF process may be accompanied by some changes in glycoconjugates biosynthesis and distribution and so cause implantation failures.

Key words: IVF, Anovulatory cycle, Glycoconjugates.

P-84

Effect of calcium ionophore on fertilization and embryo cleavage after intracytoplasmic sperm injection

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Introduction: Being alive and having the capacity to undergo the acrosome reaction are requirements for a spermatozoon to fertilize an oocyte. Failed fertilization occurs in 2-3% of ICSI cycles and is mainly due to lack of oocyte activation. The aim of this study was to determine the effect of oocyte activation with Calcium Ionophore on fertilization and cleavage rate of human embryos in patients with abnormal sperm morphology.

Materials and Methods: This was a case-control study that was performed in Novin Infertility Institute in 2009. In this study patients with male factor infertility (patients with round head sperm and also patients with low sperm morphology whose fertilization rate in their previous ICSI was extremely low) were included. The oocytes retrieved of 10 couples randomly underwent two protocols [ICSI without assisted oocyte activation (AOA): control group and ICSI combined with AOA: treatment group]. For elimination the confounding factors, we divided the same oocytes retrieved in each patient for comparing the outcome between groups.

Results: Data showed there were statistically significant between treatment and control groups, according to fertilization and cleavage rate (on day 3) 64.6%, 59.5% vs. 27.1% and 25% respectively ($p < 0.05$).

Conclusion: It appears that AOA with Calcium Ionophore treatment improved fertilization and developmental rate in patients with abnormal sperm morphology. Further studies with larger sample size are needed.

Key words: AOA, Calcium Ionophore, ICSI.

P-85

Study of short time exposure to 4°C on expression of monocarboxylic transporter (MCT) genes 1-4 in 4-cell mouse embryos

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Introduction: One of the best methods of embryo preservation is cryopreservation. However, this method can have serious sequences on the embryo like killing the embryos, produce chromosomal abnormality and so on. Therefore, some of the researchers proposed an alternative for short time preservation of the embryos by protection in 0-10 °C temperatures. The aim of this study was to determine the effect of short time exposure to 4°C on Gene expression profile of MCT 1, 2, 3 and 4 in 4-cell mouse embryos.

Materials and Methods: In this study 4-cell embryos divided into two groups: first one, fresh 4-cell embryos (control group) and the second group 4-cell embryos that stayed for 24 hours in 4°C (test group). Total RNA was extracted separately from embryos of each group using Kia gene kit. First-strand cDNA synthesis was performed using oligo dT primers and the Superscript II reverse transcriptase system. RT-PCR was performed using the prepared cDNA and primers for MCT 1-4. For detecting the expression of MCT1-4 genes, samples were then loaded on 3% Agarose gel for half an hour.

Results: Among all MCT1-4 genes only MCT 4 didn't express in the control group. In contrast, none of MCT genes were expressed in test group.

Conclusion: In conclusion our investigations indicate that short time exposure to 4°C for 24 hours is not an appropriate way for embryos preservation and it may have some damages on the embryos because of no expression of the MTC1-4 genes.

Key words: Cryopreservation, Embryo, Monocarboxylic Transporter Genes, RT-PCR.

P-86

Oral morphine consumption delayed development of brain cavity and central canal in central neuron system of Wistar rat embryos

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Introduction: Previous studies have shown that morphine consumption during pregnancy may delay embryo development or cause abnormal nervous system function. The present study focused on the effects of maternal morphine consumption on ventricles and central canal development in Wistar rats.

Materials and Methods: Wistar rats (170-200g) were used throughout. The experimental groups after pregnancy received 0.05 mg/ml of morphine by tap water while, the control group received water. On 17th and 14th day of pregnancy, the pregnant animals were anesthetized by chloroform and the embryos were removed surgically. The embryos were fixed in formalin 10% for 4 weeks. Then, tissue processing, sectioning and staining hematoxylin and eosin (HandE), were applied for the embryos. The sections were examined for ventricles and central canal and choroids plexus development by light microscope and MOTIC , SPSS software.

Results: Severe reduction area of the third as well as lateral ventricles and central canal were observed in the experimental group. In addition, an increase in the choroids plexus area in the experimental group regarding to controls was identified.

Conclusion: The study showed that oral morphine consumption has caused to a decrease area in the brain cavity such as central canal and an increase in choroids plexus area. These abnormalities may be the cause reduced CSF of incomplete development observed in the fetus born by opioid addicted women.

Key words: Ventricles, Brain Cavity, Choroids plexus, Morphine, Wistar rats.

P-87

Oral morphine consumption inhibits embryo cavities development in nine day pregnant Wistar rats

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Introduction: Previous studies indicated that morphine consumption during pregnancy could inhibit embryos development. Present study further evaluated the effects of oral morphine consumption on the embryo cavities development in nine day pregnant rats.

Materials and Methods: Female Wistar rats (W: 170-200 g) were used in the present study. Experimental group were received morphine (0.05 mg/ml of tap water) after one night coupling with male rats for mating. On the 9th day of pregnancy, the pregnant animals were anesthetized with chloroform and the embryos were removed surgically and fixed in 10% formalin. The fixed embryos were processed and stained by H and E method and evaluated for their development. The surface area of embryo cavity, as well as surface area in both amniotic cavity and chorionic cavity of the embryo and surface area, all was calculated by MOTIC software.

Results: Our results indicated that both embryo and chorionic cavity surface area of embryo were increased in experimental group. In addition surface area of amniotic cavity was reduced in experimental group.

Conclusion: Taken together, our results showed that all embryo cavity development indicators were abnormal in experimental group. These abnormalities may be the cause of incomplete development observed in the fetus born by opioid addicted women.

Key words: Amniotic cavity, Chorionic cavity, Embryo, Morphine, Rat.

P-88

Effect of tamoxifen on female genital tract histogenesis in rat fetus

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Introduction: Tamoxifen is a synthetic, non-steroidal, anti-estrogenic/competitive antagonist, which is widely used for treatment of early and metastatic breast cancer. Its Anti-estrogenic effect appears to be related to its ability to reduce estrogen receptor levels or to inhibit the binding of estradiol (E2) to the estrogen receptors (ER). Although TAM acts primarily as an anti-estrogenic, it also exerts a mild estrogenic effect. We conducted an experimental study to evaluate the effect of Tamoxifen toxicity on the female genital tract histogenesis in rat's fetus. Moreover, hormonal situ also were measured.

Materials and Methods: This experiment was conducted on pregnant female Wistar rats. The pregnancy was proved by vaginal smear preparation. The pregnant rats were assigned to 6 groups (n=5). The rats received either olive oil or test compound including E2, TAM, on day 8-13 of pregnancy. All rats in tree groups on day 20 of pregnancy were euthanized by CO2 inhalation and immediately female fetuses and in particular urogenital system of the fetuses were sampled and stored in 10% Buffer phosphate formaldehyde and after 72 hour were processed through HandE technique and other three groups(control, TAM and E2) to study on neonates.

Additionally the blood samples were collected to hormonal analysis and stored at -20°C. The serum E2 level was determined through direct and competitive CLIA method (chemiluminescent immuno assay).

Results: In the histomorphometrical study of this experiment in different part of genital tract in the factors of uterine tube ,uterus ,uterine cervix and vagina diameter and theirs wall and epithelial thickness in both fetus and neonate in comparison between the test groups and control group increased significantly in E2 group and decreased in TAM group. In the histological study of the genital tract in histogenesis and differentiation of structure of uterine tube, uterus, uterine cervix and vagina between the groups were differed significantly in both fetuses and neonates samples. The hormonal analysis for E2 level in serum,

following treatment with E2, TAM, and olive oil at given concentrations revealed that E2 level in serum increased dramatically. Despite of significant increase in E2 level of TAM treatment group, there is remarkable difference between E2 and TAM treated groups as serum E2 level in E2-treated group was found 2 –fold higher than that TAM-treated group. We also observed that FSH level in treated groups of E2 and TAM, significantly but slightly declined. Although there is no significant difference between two treated test groups, decreasing of FSH level in TAM-treated groups is more pronounced than that E2.

Conclusion: In conclusion, this study could demonstrate that in case if TAM administrations take place at gestation period, potentially some reproductive disorders in fetuses and hormonal changes would be inevitable.

Key words: Tamoxifen, Rat Fetus, Genital tract, Histogenesis, Histomorphometrical.

P-89

Evidence for establishment of androgen-dependent prostatic adenocarcinoma xenograft model in athymic nude mice

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Introduction: LNCaP is a human prostatic cell line that high-affinity specific androgen receptors are present in its cytosol and nuclear fractions. Also estrogen receptors are demonstrable in cytosol. The model is hormonally responsive. Accordingly it may be of use for investigations as the significance of sex hormones in prostate adenocarcinoma.

Materials and Methods: Tumors were induced in athymic nude mice (8 weeks old) by injection of cultured LNCaP cells subcutaneously. The tumors were measured with calipers and the tumor volume was calculated. At the end of the study tumors were examined pathologically.

Results: The frequency of tumor formation following s.c. injection of 3.3×10^6 cells/animal was interestingly high. Also the tumors grew rapidly.

Conclusion: Prostate cancer is a very prevalent neoplasm in men. Androgens play an important role in prostate adenocarcinomas. As the results of this study indicated, LNCaP xenograft model provides an excellent opportunity for investigating on the effect of androgens in prostate adenocarcinoma.

Key words: Prostate cancer; LNCaP; Androgens; Athymic nude mice.

P-90

Effect of mobile phone waves on pregnant mouse

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Introduction: Many experiment emphases that the microwaves have harmful effect on human body, but there is no study by mobile phone wave on pregnant animal or human.

Materials and Methods: In this study we use 30 pregnant mouse (192 male and female embryo) and studying influence of mobile phone waves on their embryos at 1, 2, and 3 week of pregnancy.

Results and Conclusion: There wasn't significant effect of mobile phone waves on pregnant mouse embryos, weight, morphology and male / female ratio and reproduction ability in male and female embryo after 100 days.

Key words: Pregnancy, Microwave, Mobile phone, Embryo.

P-91

The effects of carbamazepine on pregnancy outcome of mouse

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Introduction: The risk of congenital malformations in newborns, prenatally exposed to antiepileptic drugs, is around 5% which is 2 to 2.5 times that of general population. Carbamazepine (CBZ) is choice treatment for epilepsy. The aim of this study was to investigate the effect of CBZ on pregnancy outcome in mouse.

Materials and Methods: 60 pregnant mice were divided into 3 groups with 20 pregnant mice in each. The first (control) group received no

treatment, the second group was received solvent and was as sham and the third group received carbamazepine (240 mg/kg) during the 8th, 9th, 12th and 13th days of pregnancy. Finally in the 18th day of pregnancy, after weighting the pregnant mouse, the mouse was killed and the uterus was dissected and the embryos removed. The number of embryo and their general appearance abnormalities were studied and recorded.

Results: The average number of absorbed embryo in CBZ group was more than the first two groups while the mean weight of embryo in this group was lower than the control and sham groups. The embryo of this group also had more creases on their body; some of them also had malformations.

Conclusion: it can be concluded that the carbamazepine induces more abnormalities and absorbed embryo in comparison with control and sham groups.

Key words: Carbamazepine, Pregnancy, Epilepsy.

P-92

Effect of co-culturing of mesenchymal stem cells on mouse embryo development

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Introduction: The aim of this study was to evaluate the effect of co culture system on embryo development. Among the different cell lines that can be used as feeder cells for co cultures, mesenchymal stem cells (MSCs) are autologous, safe and easy to recover and used.

Materials and Methods: Mesenchymal stem cells were isolated from mouse bone marrow (BM-MSCs) based on their capacity to adhere to plastic culture surface. 2PN embryo was randomly placed in drops with conventional T6 medium (control), DMEM with or without MSCs co culture and embryo development was evaluated after 5 days co culture.

Results: The blastocyst rates did not differ significantly between embryos from conventional medium and co culture systems. In addition, the results showed that blastocyst rates in the co culture and conventional groups were higher than in the DMEM only groups ($p < 0.05$).

Conclusion: Mesenchymal stem cells co- culture systems improved pre implantation embryo development.

Key words: Mesenchymal stem cells, Embryo, Co-culture.

P-93

The effects of LIF and EGF on mouse oocyte maturation, fertilization and development in vitro

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Introduction: Mammalian oocytes and embryos are exposed to a mixture of many different growth factors and cytokines which provides an optimized microenvironment for oocyte maturation and embryo development. In the lack of this natural microenvironment in vitro, the quality of oocyte and embryos appears to be suboptimal. Among these factors, Leukemia inhibitory factor (LIF) and epidermal growth factor (EGF) are prominent.

Objective: This study was undertaken to investigate the effects of EGF and LIF alone and in combination on in vitro oocyte maturation, fertilization and cleavage rates in mouse embryo.

Materials and Methods: The GV oocytes were collected from 35 Six to eight weeks old NMRI mice and randomly divided into 4 groups. Oocytes in the first group were cultured as the control in maturation medium, and ova in treatment groups were cultured in the same medium supplemented with 50 ng/ml rhLIF (Treatment 1), 10ng/ml EGF (Treatment 2) and 50 ng/ml LIF+ 10ng/ml EGF (Treatment 3) at 37°C in humidified 5% CO₂ in air. 24 h later, maturation was evaluated by extrusion of first polar body. The matured oocytes in each group were placed in IVF medium and capacitated spermatozoa were added. Then the fertilized oocytes cultured for 96 hours and developmental rates until blastocyst stage were assessed. Finally, in order to count the total cell number the blastocysts were stained using Hoechst 33258.

Results: Addition of EGF and LIF to maturation medium in treatment groups resulted a higher maturation rate compared with the control group. There was not any significant difference in the rate of fertilization among the groups. The rate of cleavage in all of treatment groups was significantly higher in compared with control embryos. The cleavage rate was significantly higher (79.1%) in the group that the oocytes were treated by LIF and EGF together. The rate of blastocyst formation also was significantly higher in LIF + EGF group (62.2%) comparing to the other groups. The rates of hatching in groups

treatment 1 (35.2%) and 3(41%) was significantly higher comparing to the control (22.3%) and treatment 2 (21.1%). Also the mean of total cell number in control blastocysts significantly was lower than all of treatment groups ($p < 0.05$).

Conclusion: The findings of this study suggest a beneficial effect of LIF and EGF on mouse oocyte maturation and cleavage rates.

Key words: LIF, EGF, IVM, IVF, Embryo development, Mouse.

P-94

Carrot seed extract prevents gentamycin-induced oxidative stress and spermatogenesis defects in rats

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Introduction: In spite of the effectiveness and extensive use of gentamicin (GM), its clinical application is often limited due to its *toxicity*. To investigate the effects of carrot seeds extract (CSE) on GM-induced oxidative stress and spermatogenesis defects in rats.

Materials and Methods: Forty adult male rats were randomly divided into five groups: 1) control group, 2) group receiving low (200 mg/kg/day) dose of CSE, 3) group receiving high (400 mg/kg/day) dose of CSE, 4) animals receiving high-dose of CSE with GM (5 mg/kg/day), and 5) GM (5 mg/kg/day) treated group. After 4 weeks, total antioxidant status (TAS) and malondialdehyde (MDA) levels of serum together with cauda epididimal sperm reserves (CESR) and motility of sperms were determined. The seminiferous tubule histology and tubular atrophy were also studied.

Results: After 4 weeks treatment, a significant reduction was observed in TAS level of the control group following GM administration. The administration of a high dose of CSE could *compensate* this reduction. The CSE administration reduced significantly the GM-induced level of MDA. There was also a significant increase in the CESR compared with the control (28.2 ± 1.8 vs. 45.1 ± 2.0 , $\times 10^6$) after CSE administration. The

extract could also protect testis from the GM-induced necrosis. The statistical comparison was carried using one-way ANOVA followed by Tukey HSD as Post-ANOVA test.

Conclusion: According to the results obtained, CSE can improve the rat antioxidant capacity from GM-induced oxidative stress and overcome reproductive toxicity of GM.

Key words: CSF, GM, Spermatogenesis.

P-95

The study of immunosuppressive effect of pregnant mouse serum on dendritic cells

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Introduction: In normal pregnancy the maternal immune system is directed towards tolerance or suppression in order to prevent the rejection of the semi allogenic fetus. Antigen presenting cells especially dendritic cells (DCs) are the key cells in initiation and regulation of immune responses. The presence of potent immunostimulatory dendritic cells in the decidual tissue of pregnancy has been demonstrated. The aim of this study was to determine how allostimulatory activity of DCs could be affected during pregnancy.

Materials and Methods: DCs were isolated from spleen of pregnant or non-pregnant Balb/c mice and co-cultured with allogenic C57BL/6 T lymphocytes prepared by nylon wool method from brachial lymph nodes. Some cultures of non - pregnant female DCs were treated by 2.5% serum obtained from pregnant mice at early, middle or late gestational periods and were used in the same mixed lymphocyte reaction (MLR) settings. Cell proliferation was measured by ³H thymidin incorporation and cytokine production was measured in supernatants of MLR cultures using ELISA method. Effect of pregnant mouse serum on expression of DC surface markers was evaluated by flow cytometry.

Results: No significant difference was found between stimulatory potential of splenic DCs from pregnant and non-pregnant mice in induction of allogenic T cell proliferative response. Moreover, serum of early or late pregnancy did not have any effect on DCs function in comparison with non-pregnant mouse serum, while mid-pregnancy

serum significantly inhibited allostimulatory activity of DCs. IFN γ production in co-culture of DCs treated with pregnant mouse serum was significantly lower than that of control group, however, no significant difference in IL-10 production was observed. Treatment of DCs with pregnant mouse serum did not influence the percentage of cells expressing MHC-II, CD86, CD8 α or CD11b. However a marked reduction of the mean fluorescence intensity of MHC-II was observed.

Conclusion: Our results concerning the diminished capacity of DCs to induce production of TH1 cytokines and allogenic T cell proliferation after treatment with pregnant mouse serum reveals a new way of immunologic tolerance against semi-allogenic fetus.

Key words: Immunosuppressive, Dendritic cells, MLR.

P-96

Chronic chemotherapy induced sperm and hormonal disorders in male rats

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Introduction: Cyclophosphamide, a bifunctional alkylating agent, is extensively used as an anticancer chemotherapeutic agent for childhood and adult malignancies and as an immunosuppressive agent for organ transplantation, systemic lupus erythematosus, glomerulonephritis, multiple sclerosis and benign diseases. Cyclophosphamide targets rapidly dividing cells, disrupting cell growth, mitotic activity, differentiation and function via alkylation of DNA at the N7 position of guanine. Cyclophosphamide has many side effects on different body organs such as bladder, liver, nervous system and gonadal function.

Materials and Methods: In this study 24 adult male Wistar rats were randomly divided into 3 groups (n=8 each) with two groups serving as control and sham (normal saline i.p.), in the drug treated group cyclophosphamide administered (5 mg/kg/day i.p.) for 45 days. All rats were sacrificed by CO₂ inhalation and cauda epididymis were removed surgically and placed in 5 ml ham's F10 medium (prewarmed) and incubated for 30

min, 5% CO₂, 35°C in CO₂ incubator to allow the spermatozoa to swim out. The spermatozoal suspension was analyzed for sperm motility, concentration in the cauda epididymis, viability and sperm chromatin quality and DNA integrity was assessed by Aniline blue and Acridine Orange staining following sperm sample preparation. Serum testosterone level was determined by radioimmunoassay and FRAP and TRAPS assays were used to determine total antioxidant power and lipid peroxidation respectively in testis tissues and plasma.

Results: This study confirmed that treated by CP had significant decrease the testosterone level in plasma. CP had significant increase the fat peroxidation level and decreases the total antioxidative capacity in the plasma and testis tissues. These changes were associated with significant increase in DNA Damage and chromatin abnormality in the cauda epididymal spermatozoa as evidenced by Acridine Orange (AO) and Aniline blue staining respectively. Treatment of male rat with CP caused significant decrease in sperm count, motility, and viability, while abnormal sperms increased as compared to control.

Conclusion: Taking collectively, the present results highly support the idea that testicular toxicity of CP is mediated through oxidative stress.

Key words: Cyclophosphamide, Male rat, DNA damage, Testosterone, Spermatozoa, Epididymis.

P-97

Agouti-related protein stimulates preovulatory surge of luteinizing hormone in ewe

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Introduction: Agouti-related protein (AGRP) is a potent orexigenic peptide that involved in reproductive axis in mammals and localized to arcuate nucleus of the hypothalamus in the ewe. A bulk of evidences suggests that in the energy negative balance, AGRP inhibits Luteinizing hormone (LH) secretion. Regarding stimulatory effects of AGRP on gonadotropin releasing hormone secretion little has been known. The

objective of the present study was to investigate the AGRP expression in estrous and luteal phases.

Materials and Methods: Six ewes were divided into two estrus and luteal groups (n=3 in each group) and expression of AGRP in the arcuate nucleus of each group was evaluated by using immunohistochemistry.

Results: There was no significant difference between areas of arcuate nucleus. The number of AGRP immunoreactive neurons in the estrous phase (63.65 ± 14.37) was significantly more than luteal phase (25.22 ± 6.78) ($p < 0.05$).

Conclusion: This finding demonstrated that AGRP involved in gonadotropin releasing hormone secretion and it can be an important stimulus on the reproductive axis.

Key words: AGRP, Gonadotropin, Luteinizing hormone.

P-98

Survey of Sildenafil effect on normal human endometrial epithelial cells in in-vitro culture

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Introduction: Sildenafil is a selective inhibitor of c-GMP specific phosphodiesterase type 5 (PDE5). Clinical observation showed considerable effect of sildenafil on endometrial thickness. There is no available data on sildenafil effect on in vitro culture of human endometrial epithelial cells. The aim of present work is to investigate sildenafil effect on human endometrial epithelial cells in in-vitro culture.

Materials and Methods: Endometrial biopsies (n=10) were washed in PBS and digested with 2 mg/ml of Collagenase I (Sigma) at 37°C for 2 hour. Epithelial glands were separated by sequential filtration through nylon meshes (100 and 40 µm pores) respectively. Epithelial glands were treated by trypsin for obtained individual cells. The cells were counted and divided to four groups: control and different sildenafil dose (1, 10, and 20 µM). Cultures were done for 15 days at 37°C, 5% CO₂ and media were changed every 3 days. Cells Morphology and number were calculated at the end of study. Data were analyzed by one way ANOVA.

Results: There is no significant difference between groups in cell numbers, but it increased slightly in

cases groups. Epithelial cell morphology changed into long spindle cells in cases groups.

Conclusion: sildenafil didn't show negative effect on human endometrial epithelial cells.

Key words: Epithelial cells, Sildenafil, Endometrium.

P-99

Effects of luteal phase hormones on the vaginal mucosa in the hyperstimulated mice at the implantation window period

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Introduction: Histological changes of vagina are hormone dependent. The changes may show different morphology in ovarian hyperstimulated cases. This study was to investigate and compare the effects of different luteal support hormones on the histology of vagina in superovulated mice.

Materials and Methods: Female mice were superovulated by PMSG and HCG then were induced pseudopregnancy by vasectomized mice; the mice were divided into two groups; experimental and control groups. Experimental group included three groups; the hyperstimulated mice were given a four consecutive daily injection of Progesterone, (P group), Estrogen (E group), Estrogen + Progesterone (E+P group). Natural control group mice were induced pseudopregnancy without any superovulation. The vagina samples of all groups were collected after day 4.5 of pseudopregnancy at implantation window phase. The samples were prepared for the histological technique.

Results: The results showed that vaginal epithelium was noncratinized in the control group. In the progesterone group height of epithelium was decreased in comparison to control group as well high cellularity in stroma. In the E group epithelium was cratinized while in the E + P group epithelium was similar to control group. The height of epithelium in E+P group increased in comparison to control group and the cellularity of stroma was reduced.

Conclusion: The histomorphological changes of vagina after ovarian hyperstimulation at luteal phase are similar to normal luteal phase except to progesterone administered group. The present study revealed that progesterone injection at luteal phase altered the vagina reactions. These results can be a guideline for further studies in ovarian hyperstimulation cases.

Key words: Ovarian hyperstimulation, Vagina, Mice.

P- 100

Effects of luteal phase hormones on the ovary in the hyperstimulated mice at the implantation window period

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Introduction: Luteal phase supplementation is routinely carried out after ovarian hyperstimulation. The luteanization of ovary after follicle puncture may not sufficient to continuation of pregnancy. In the present study, exogenous hormones are administered after HCG injection until implantation time to investigate the ovarian lutenization in hyperstimulated mice as a IVF model.

Materials and Methods: Female mice were superovulated by PMSG and HCG then were induced pseudopregnancy by vasectomised mice; the mice were divided into two groups; experimental and control groups. Experimental group included three groups; the hyperstimulated mice were given a four consecutive daily injection of Progesterone, (P group), Estrogen (E group) , Estrogen + Progesterone(E+P group). Natural control group mice were induced pseudopregnancy without any superovulation. The Ovarian samples of all groups were collected after day 4.5 of pseudopregnancy at implantation window phase. The samples were prepared for the histological technique.

Results: The results showed that different stages of developmental follicle with corpus luteum were seen in control group. The amount of corpus luteum was more in P group rather than other groups. In E+P group, different types of follicle and more corpus luteum were observed.

Conclusion: Histological results of ovaries in Estrogen along with Progesterone administration groups showed a similarity to control group. This pattern is mimicking the serological hormones in normo-ovulatory cycles. Although progesterone injection caused appearing of many corpus luteum, Its demonstration was different with control and E+P groups.

Key words: Ovarian hyperstimulation, Ovary, Mice.

P- 101

The Effects of progesterone on developmental competence of mouse germinal vesicle (GV) oocytes in the presence or absence of cumulus cells

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Introduction: The present study aim was to investigate the role of progesterone in concentrations similar to that of pre-ovulatory follicular fluid on the developmental competence of cumulus-oocyte complexes (COCs) and cumulus-denuded oocytes (CDOs) of mouse GV oocytes.

Materials and Methods: GV oocytes of pregnant mare's serum gonadotropin (PMSG)-primed prepubertal mice were divided into CDOs and COCs groups. The oocytes were cultured in TCM₁₉₉ with 10 and 38 μ M concentrations of progesterone and without progesterone (controls), and then the number of oocytes at GV, germinal vesicle breakdown (GVBD) and metaphase II (MII) stages were counted. *In vitro* fertilization (IVF) of MII oocytes and its development to blastocyst stage were evaluated.

Results: Significantly different MII rates were observed between the COCs (85%) and CDOs (68%) control groups. The MII rates of 83% and 48% for COCs and 65% and 53% for CDOs were obtained in TCM₁₉₉ contain 10 and 38 μ M progesterone concentrations, respectively. The MII rates were lower ($p < 0.05$) in both COCs and CDOs as compared to their respective control groups except for 10 μ M. The fertilization and blastocyst rates of COCs (83% and 35%, respectively) were higher ($p < 0.05$) than those of CDOs (51% and 5%, respectively) control groups. The fertilization and blastocyst rates in the presence of 10 μ M (81% and 36%, respectively) and 38 μ M (85% and 30%, respectively) progesterone in COCs and CDOs (52% and 4% for 10 μ M; 56% and 4% for 38 μ M, respectively) were similar to their respective control groups.

Conclusion: Adding progesterone to medium could not improve maturation of the mouse GV oocyte and their development to blastocyst stage.

Key words: Germinal vesicle oocytes, IVF, Progesterone, Cumulus denuded oocytes, Cumulus oocyte complex.

P-102

Interaction between maternal KIR and fetal HLA-C in success of pregnancy

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Introduction: Recently, it has been proven that interaction between the uterine natural killer-cells and fetal trophoblasts is a key factor in successful implantation. In human, the trophoblast cells express less polymorphic, non- classical MHC and classical HLA-C that is highly polymorphic. Interaction between HLA-C molecule and the receptors on uNK Cells result in release of a variety cytokines and chemokines that modulate placental relationship between mother and her fetus. Therefore investigation of parental HLA-C and maternal KIR genes is interesting for determining the role of these genes in occurrence of recurrent miscarriage.

Materials and Methods: We screen the couples with recurrent abortion who referred to Royan Institute for finding the cases of idiopathic miscarriage. Then, DNA genotype for maternal KIR and parental HLA-C genes using the PCR-sequence-specific primer method in 100 cases and compare with control group who have normal pregnancy.

Results: HLA-C molecules recognized by KIR can be divided into C1 and C2 phenotype that discriminated by different amino acids at position 80. Accordingly, calculation of HLA-C genotypes frequency and KIR genotyping in control and case groups is ongoing. However, data indicate that the frequency of the HLA-C2 group was increased in case group as compared to controls.

Conclusion: Whereas KIR /HLA-C genes intensively polymorphic, any of particular maternal KIR/parental HLA-C genotypes may have different effect on success of pregnancy. Furthermore, our findings can provide new ideas about how the maternal immune system may be operating in pregnancy to regulate placentation and depth of intrusion of trophoblast cell into the mother.

Key words: KIR, Fetal HLA-C, Pregnancy.

P-103

Endothelial nitric oxide synthase gene polymorphism and recurrent miscarriage

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Introduction: Recent studies have indicated that genetic polymorphisms of the specific genes is one of the causes of recurrent miscarriage. In the other hand it is observed that nitric oxide (NO), as a signaling molecule, is participated in primary events of pregnancy such as implantation of blastocyte, differentiation of trophoblast, trophoblast invasion, and it enhances blood supply through the maternal arteries to the placenta thus it has a role in implantation and maintenance of pregnancy. NO is produced by endothelial nitric oxide synthase that is expressed in placenta, whereas this enzyme and its production play a key role in early stages of gestation, we investigated relationship between polymorphism of this gene and complication of pregnancy.

Materials and Methods: In this study we used the 77 women who had three or more constitutive miscarriage with unknown reason in first trimester of their pregnancy in case group. Diagnostic procedure included karyotyping of the partner, hysteroscopic examination, infection tests, a comprehensive hormonal status and identification of antiphospholipid antibodies, thrombophilic complications were used to rule out known causes of pregnancy loss. Control group is included 98 women with normal pregnancy. Both groups were analyzed for the VNTR polymorphism in intron4 of endothelial nitric oxide synthase gene by polymerase chain reaction and the Glu298Asp missense mutation in exon 7 of this gene by RFLP-PCR and sequencing.

Results: The result shows that frequency of (ab) genotype of intron4 in the patient group is more than control but other results don't show significant difference between two groups.

Conclusion: With this data we can say there is an association between an intron polymorphism and recurrent miscarriage but further studies with larger samples need to be done to confirm these findings and this study is ongoing.

Key words: Recurrent miscarriage, Polymorphism, Nitric oxide.

P-104

Spermatogonial transplantation and subsequent orchidopexy in bilateral cryptorchid mouse model

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Introduction: The mainstay of therapy for undescended testes is operative treatment. Surgery for cryptorchidism is important before germ cells become scarce; because infertility is associated with the lack of germ cells. The aim of this study was to examine the effect of spermatogonial transplantation and subsequent orchidopexy after creation of degenerative changes in bilateral cryptorchid mouse model.

Materials and Methods: Bilateral cryptorchidism was induced in immature mouse by returning two testes to the abdominal cavity via a surgical procedure. Orchidopexy and spermatogonial transplantation was performed 3 months after heat exposure. The number of spermatogonia and differentiated germ cell were measured.

Results: Transplantation of spermatogonial stem cells in to the mouse seminiferous tubules was successful in recipients which had severe tubular degeneration after induction of cryptorchidism. After transplantation of spermatogonial stem cell in to the cryptorchid testis, germ cell colonization was shown, the number of spermatogonia, spermatocytes returned to near normal range but spermatogenesis was recovered partially at the late stages of spermatogenesis.

Conclusion: The reason of partially return of spermatozoa after transplantation maybe is the severe effects of surgery on the blood supply or innervations of the testis and a serous sac was not reconstructed around the testis without adhesions, which may be important for normal spermatogenesis.

Key words: Cryptorchidism, Mouse, Spermatogonia, Testis, Transplantation.

P-105

Contraceptive effects of a new derivative of Nifedipine in male adult rats

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Introduction: 1, 4 Dihydro 2, 6 Dimethyl 4 (4.Nitrophenyl) 3, 5 Pyridinedicarboxylic acid Dimethyl ester (DDNPD) is a new analogous of Nifedipine that has no effect on calcium channels of cardiovascular system. Because Nifedipine can reduce fertility in males (through effect on calcium channels on sperm membrane and inhibition of acrosomal reaction), this study was done to evaluate the effect of DDNPD on reproductive system physiology and fertility in male rats.

Materials and Methods: DDNPD was injected 10mg/kg twice a day subcutaneously to the test group of adult male rats for 50 days. Control group treated with propylene glycol 1 mg/kg twice a day in the same way.

In the assessment of some fertility indices, there was a significant decrease in motility.

Results: and viability rate of sperm ($p<0.001$), the epididymal sperm reserve rate ($p<0.01$) and fertility rate ($p<0.01$) in the test group but there was no difference in testosterone level between the groups.

Conclusion: These results are conclusive of post testicular antifertility effect of DDNPD if injected 10 mg/kg for 50 days to male adult rats.

Key words: Calcium channels, Infertility, Rats, Spermatozoid.

P-106

The effects of acrylamide on sperm parameters and membrane integrity of epididymal spermatozoa in mice

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Introduction: Acrylamide is a chemical reactive substance used in various industries such as polymer industry, cosmetic, adhesives, paper and textile industries, wastewater treatment, and laboratory gels. Recently, the discovery of acrylamide in a variety of human foods like heat-processed starchy foods such as potato chips, French fries, and bread was reported. Acrylamide is known as a carcinogen and cytotoxic material too. The aim of this study was to determine the effect of acrylamide on membrane integrity and sperm parameters in mice.

Materials and Methods: This experimental study was conducted on thirty male NMRI mice, age 8 to 10 weeks and weight in 25-30 gram which were randomly allotted into three groups, equally. Group I (low dose) and Group II (high dose) were fed on water solutions containing acrylamide 5 and 10 mg/kg/day, respectively, for eight consecutive weeks, while the third group on fresh water only as the control, then sperms analyzed for parameters as well as evaluation of membrane integrity by Hypoosmotic Swelling Test (HOST) for sperms tail and Eosin Exclusion Test (EET) for sperms head. The data analyzed by SPSS v.13 software in ANOVA test.

Results: In sperm analysis, the total motility and progressive motility (fast and slow motilities) in both Group I and II was decreased significantly ($p=0.00$), but no significant change was observed in non-progressive motility ($p>0.05$). Total motile sperm count decreased significantly only in group II ($p=0.01$). Sperm morphology was not significantly changed ($p>0.05$). In membrane integrity evaluation of sperm, functional intact membrane of sperm tail in both Group I and II had significant decrease ($p=0.00$). However, membrane integrity of sperm head decreased significantly only in Group II ($p=0.00$).

Conclusion: These results indicate that acrylamide through effect on membrane integrity decreased sperm vitality, also causes abnormal sperm parameters in progressive motility and count.

Key words: Acrylamide, Membrane integrity, Mouse spermatozoa.

P-107

Effects of sera from women with unexplained recurrent spontaneous abortion on sperm motility and apoptosis

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Introduction: Recurrent spontaneous abortion impacts almost 1% of couples. The etiology of the 23% of them is unknown. Sperm apoptosis can influence the embryo quality. The sera from women with unexplained recurrent spontaneous abortion (RSA) have toxic effects on embryos that grow in the uterus. Therefore, the abnormal condition of the uterus may affect sperm qualities. The objectives of this study were to search if these sera could modify the sperm qualities.

Materials and Methods: For this purpose, sera of 20 women with unexplained RSA history and sera from 20 women with at least two healthy children and any abortion history were added to the sperms samples from 20 healthy men for 2 hours. The sperm motility was assessed after incubation with sera. The samples were stained with Tdt mediated dUTP nick end labeling (TUNEL) assay for DNA fragmentation. The samples were analyzed with flow cytometry and the percentage of the TUNEL positive sperms were calculated. The data were analyzed by T-test.

Results: The results indicated that the incubation of the sperm samples in sera with unexplained

RSA lead to decrease the sperm motility significantly. The percentage of the sperm with abnormal fragmented DNA increased after incubation with unexplained RSA compare to the control; however, it was not significant.

Conclusion: In conclusion, because the sera had no impact on DNA fragmentation and the percentage of the apoptotic sperms in semen samples, it seems that the sperms chromatin quality cannot be influenced by uterine condition and by this way, it could not modify the embryo quality. However, the sera of women with unexplained RSA can affect the fertility rate by reduction of the sperm motility.

Key words: Unexplained recurrent spontaneous abortion, Sperm, Apoptosis, Sperm motility.

P-108

The effect of acamprosate on serum testosterone level and contraceptive effects on adult male rats

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Introduction: Acamprosate is an anti alcoholism drug. The consumption of this drug can be inactive the hepatic aldehyde dehydrogenase and also prevents acetate production. The present study was carried out with the aim of determining the effect of acamprosate on spermatogenesis and testosterone production in adult male rats.

Materials and Methods: In this experimental research 50 male rats wistar strain were divided into 5 groups of 10. Concentrations of 2, 4 and 8 g/kg as sub lethal doses were injected to the peritoneum for 21 days in three treatment groups. The two remaining groups received the solvent (distilled water) and no compound. The results were analyzed through one-way analysis of variance and t- test.

Results: The results showed that 8 g/kg of acamprosate reduced serum testosterone level by 61.4% ($p<0.05$), while it had no significant effect on serum FSH and LH levels. Histological investigations of testis showed a decline of 11.8%, 20.5% and 59.3% sperm cells in doses 2, 4 and 8 g/kg respectively. However no adverse effect was observed owing to the injection.

Conclusion: According to the results, acamprosate at dose of 8 g/kg in rats has probably caused the weakened function and reduced testosterone level

and spermatogenesis through inhibiting acetate production, cholesterol prefabrication and testicular activity. It is possible that high dosage of this drug arising infertility risk in men.

Key words: *Acamprosate, Spermatogenesis production, Testosterone Production.*

P-109

Ultrastructural and immunochemistry study of GnRH potential in inhibition of side effect of drugs used in chemotherapy on apoptotic cells

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Introduction: Male factors, mainly spermatogenesis disorder, are responsible for 20 – 30% of infertility occurs in different societies. One of the known causes of spermatogenesis disorder is chemotherapy in patients with cancer. The side effect of chemotropic agents may last from 10 years up to the end of the life. Since dividing cells are mainly affected by anticancer drugs, the aim of the present study is to investigate the preventive effect of GnRH antagonist as a suppressor of spermatogonial proliferation, on spermatogenic defect produced by anticancer drug (thiotepa).

Materials and Methods: In the present study 30 adult male mice aging 6-8 weeks were used. The mice were divided into 3 equal groups as; control, thiotepa (T group) and thiotepa + cetorelix, a GnRH antagonist, (T +C group). Thiotepa was injected as i.p. for 5 days at 2.5 mg/kg doses. In T+C group cetorelix injection was started one week before thiotepa treatment and continued for 3 more weeks. Since spermatogenic cycle in mice is 35 days, mice in all groups were sacrificed 35 days after thiotepa injection. Half of testicular specimens were fixed in formaldehyde for LM studies (Ki-67) and others were fixed in 2% glutaraldehyde and prepared for EM studies. The thin sections were studied with LEO 906 TEM.

Results: Electron microscopic study showed a lot of apoptotic cells. LM study with Ki67 Kit showed that mean of apoptotic cells in control group were 9.91 ± 0.19 , in T group were 4.85 ± 0.15 and in T + C group were 9.40 ± 0.23 . Statistical Analysis of data show significance difference between control and T group ($p < 0.05$) but not between control and T + C group ($p < 0.05$).

Conclusion: According to the result it is concluded that GnRH antagonist administration before cancer treatment could prevent the side effect of anticancer drugs.

Key words: *Anticancer drug, GnRH antagonist, Immunohistochemistry.*

P-110

Survey of morpholine effects on male rat reproductive system

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Introduction: Morpholine, a secondary type of aliphatic in amine groups, has an extreme application in medical, agricultural and food industries. This substance and derivatives used as rubber accelerator, brighter for detergents and protective coating for the fruits and foods. There is no specific report on the morpholine effects on male reproductive system. The aim of present work is to examine morpholine effects on the male reproductive systems.

Materials and Methods: Adult male rats (NMRI strain) with weight average of 200-250 gr were divided into control and four experimental groups. Experimental groups were induced 5, 10, 50 and 100 mg/kg morpholine for five days by intraperitoneal injection. Then animals were killed and dissected and bloods were collected from heart for testosterone, prolactin, FSH and LH assay. Their testis and prostate were isolated, weighted and processed for histochemical studies. In order to examination of sperm motility tissue samples from caudal epididymis was isolated and minced in DMEM/F12, then sperm motility, morphology and viability were studied. Data were analyzed using one way ANOVA.

Results: Morpholine significantly decreased serum level of LH, FSH and testosterone in all experimental groups. There is no significant difference in prolactin hormone level, testis and prostate weight. Sperm motility and viability in all experimental groups significantly decreased and reproductive tissues were damaged.

Conclusion: Morpholine has disruptive effects on male reproductive system.

Key words: *Morpholine, Hypophysis-gonadal hormones, Rat, Sperm parameter.*

P-111

Effects of cefixime on pituitary-gonadal hormones, gonadotropins and morphology of adult male mice

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Introduction: Cefixime is an antimicrobial agents which is applied by many physicians. This drug has widespread activity against various pathogens, especially gram-negative organisms. Regarding to side effects of some of these groups of antibiotics on rat reproductive system, the aim of this study is determining the effects of cefixime on pituitary-gonadal hormones, gonadotropins and morphology of adult male mice.

Materials and Methods: Eighteen male mice (ages: 12-16 weeks, weight 35±5 gr) were divided to three groups including control, sham and experience.

Experience groups received cefixime (0/5 gr/kg) during 10 days, and the sham groups received drug solvent dimethyl sulfoxide (DMSO)(7c.c/kg). At the end of study titer of hormones were measured by ratio Immuno Assay (RIA) methods. The morphological criteria of testis (volume, length, weight) were measured.

Results: FSH hormone differences between control and experience groups was significant (p=0/05). DHEA hormone differences between sham and experience groups was significant (p=0/05). No significant differences were in testis morphological assays and testosterone between groups.

Conclusion: Regarding to physiological role of sertoli cells during spermatogenesis, reduction of FSH hormone may be effect on sperm production and reproductive potential of male mice. Significant reduction of DHEA hormone between sham and experience groups may be due to probable mistakes or effects of drug solvent DMSO.

Key words: Cefixime, Reproductive, Testosterone, Testis, Mice.

P-112

Effect of forced swimming stress on count, motility and fertilization capacity of the sperm in adult rats

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Introduction: The purpose of this study was to determine whether 50 days of forced swimming stress applied to adult male rats affects count, motility and fertilization capacity of sperm. It is a prospective study designed *in vitro*.

Materials and Methods: A total 30 adult male wistar rats were used in this study. All rats were divided into two equal groups (n = 15): (1) control group and (2) experimental group. Animals of the experimental group were submitted to force swimming stress for 3 min in water at 32°C daily for 50 days. Then, all male rats were sacrificed, the right epididymides were removed and sperm concentration and motility were determined. The sperm suspension was added to the ova. Fertilization capacity was assessed by counting two-cell embryos 24-26 h after completion of fertilization *in vitro*. Data are reported as mean ± SD and percentage. The difference between the control and experimental groups was determined by the unpaired t-test.

Results: The mean and standard deviation of sperm concentration in the control and experimental groups were $60.8 \pm 9.3 \times 10^6$ /ml and $20.4 \pm 5.3 \times 10^6$ /ml, respectively. There was a statistical difference of p<0.05 between the two groups in terms of sperm concentration. The percentage of motility in the experimental group was significantly different (p<0.05). The same results were obtained in case of fertility (p<0.05). Stress caused by forced swimming was observed by a significant increase in the latency of the pain response in the hot-plate test (p<0.05).

Conclusion: These results suggest that forced swimming stress in time course equal or more than spermatogenesis period, i.e. 48-50 days in the rat will be significantly effective to reduce the number and motility of sperms as well as the fertilization capacity.

Key words: Swimming stress, Spermatogenesis period, Fertilization.

P-113

Molecular study of CFTR gene by using designed primers in azoospermia's men

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Introduction: Infertility is a major problem that 10-20 percent of couples are affected and about half of this problem is about men. Several factors are involved in infertility, including genetic disorders, physical and chemical agents and chromosomal abnormalities. 40 percent of infertility are known due to quantitative and qualitative abnormalities of sperm. CFTR gene mutations are relatively common causes of infertility in men.

Materials and Methods: In this study We designed specific primers for exon 10, and then we have extracted DNA from blood samples of 110 men with azoospermia and currently We are investigating of single nucleotide polymorphism in exon 10 of CFTRgene (1539 G> T) using RFLP-PCR.

Results: For this moment was studied about 83 samples with obstructive and non-obstructive azoospermia using restriction enzyme NdeI.

Conclusion: Because of single nucleotide polymorphisms studied don't occur cutting position for the suitable enzyme, for this purpose in this study we designed the primer that occurs position for the appropriate enzyme and have cutting position only in normal or mutant samples and recognition of two samples be done easily.

Key words: CFTR gene, Azoospermia, Infertility.

P-114

The effects of vitamin E on sperm motility parameters and fertility rate in adult male rats treated with cyclophosphamid

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Introduction: Cyclophosphamid (CP) is a common anticancer agent that was used in much tumoral chemotherapy. Despite its good effects it has side effects on many organs such as testicular organs so it has been known as a male reproductive tract toxicant. On the other hand some vitamins such as vitamin E (Vit. E) are powerful antioxidants. Low levels of this nutrient have been linked to a low fertility in men. The aim of this study was to investigate the preventing role of vitamin Vit E on adverse impacts of

cyclophosphamid in reproductive sperm activity of rats.

Materials and Methods: Twenty eight Wistar male rats were divided into four groups. Cyclophosphamide was injected intraperitoneally (i.p) to two groups of animals at the dose of 6.1mg/kg body weight daily for 14 weeks to induce testicular toxicity. One of this groups received Vit E at a dose of 100 mg/kg body weight daily for 14 weeks 60 min before cyclophosphamid administration. A vehicle treated control group and a vitamin E control group were also included. At the end of the experiments animals were anaesthetized and sperm count and vital features were extracted.

Results: The results indicated that there were significant decrease in sperm count, viability, motility and fertility rate and increase in abnormal sperm in CP treated group. But when vitamin E was given together with cyclophosphamid caused an increase in sperm count, viability and motility but abnormal sperms were decreased.

Conclusion: It proposed that Vit. E can modulate and prevent the adverse effects of cyclophosphamid in testicular organs of male rats.

Key words: Cyclophosphamid, Antioxidant, Vitamin E, Sperm, Rat.

P-115

The effect of cyclophosphamid (cytoxan) on the male rat reproductive system

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Introduction: This study is focused on the toxicological effect of cyclophosphamid on epididmal sperm count, motility, and morphology and fertility rate on adult male albino rats.

Materials and Methods: In the present study cyclophosphamid was injected interaperitoneally (ip) at a dose of 6.1 mg/kg body weight daily to rats for 14 weeks.

The animals were sacrificed after 1 day of last injection and the weight of the body, testis, sperm parameter and fertility rate were assessed.

Results: Reduction in weight of testis and body were observed. Also sperm count, motility and

fertility rate significantly decreased in experimental group than in the vehicle group, but dead and abnormal sperms rate were increased.

Conclusion: We found that cyclophosphamid drug affecting on fertility parameters.

Key words: Cyclophosphamid, Sperm parameters, Male rat.

P-116

Effect of hydroalcoholic extract of Zingiber officinale on testes parameters, number and motility of sperm and determining of testosterone in rat

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Introduction: Zingiber officinale is useful vegetable. In Iranian traditional medicine, Zingiber has also been historically used to treat infertility in male and regulated the menstrual cycle in female. Therefore, this study was to determine of Zingiber officinale on male reproductive system.

Materials and Methods: 50 male rats were randomly divided into 5 groups (3 experimental and 2 controls). In experimental groups a single dose of 5 mg/kg busulfan was administered intraperitoneally. Also they fed with 50, 100, 150 mg/kg of hydroalcoholic extract of Zingiber officinale by gavages for 48 days. Negative and positive control groups received 5 mg/kg busulfan and distilled water respectively. Then rats were sacrificed, blood samples were taken and the level of testosterone was taken and the level of testosterone was measured, the number of sperm and the percentage of motile sperm in semen sample were also calculated.

Results: These data indicate that some increase in motility and sperm count and level of testosterone hormone. There was signification change between three experimental groups and control groups ($p < 0.05$). There was not a signification change in the testes parameters.

Conclusion: According to the results in would be concluded that Zingiber officinale can induce the sperm motility and sperm count and increase the level of testosterone hormone in rat.

Key words: Zingiber officinale, Busulfan, Testes, Rat.

P-117

The effects of date palm gemmule on sperm quality and sex hormone levels on partial sterile male rats as experimental model

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Introduction: Date palm gemmule has been used in traditional medicine to improve the semen quality and treat infertility. Their components remedies those are rich of antioxidant and vitamins can influence spermatogenesis. The aim of this project was to evaluate the effects of date palm gemmule on sperm quality.

Materials and Methods: To do these, seventy male rats were divided into 7 groups. The groups were injected with 5 mg/kg of busulfan. The experimental groups were treated with 50, 100, 150 and 200 mg/kg of hydroalcoholic extract of date palm gemmule for 48 days. The control was injected with busulfan without any other treatment. After this period the blood samples were taken for hormonal assay. The semen was collected from distal part of the ductus deferens. The sperm count and motility were measured and the smears were prepared. The sperm smears were stained with acridin orange, aniline blue, eosin and chromycin A3.

Results: The results indicated that estradiol decreased significantly after treatment with 50 mg/kg of the extract. The percent of the sperm with good morphology and normal chromatin histone were increased significantly.

Conclusion: It is probable that the extract with its content like phytoestrol effect the estradiol level and by this way influence the spermatogenesis and as a result the sperm quality. It may the extract improve the sperm quality because of its content like vitamins A and C, glucose and calcium.

Key words: Date palm gemmule, Sperm quality, Sex hormones.

P-118

Ultrastructural study of GnRH potential in inhibition of side effect of drugs used in chemotherapy on blood testis barrier of seminiferous tubules of mice

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Introduction: Infertility problem affects 20 – 30 % of young couples. One of the known causes of

spermatogenesis disorder is chemotherapy in patients with cancer which its side effect may last up to the end of the life. Since dividing cells are mainly affected by anticancer drugs, the aim of the present study is to investigate the preventive effect of GnRH on spermatogenic defect produced by anticancer drug.

Materials and Methods: in the present study 30 adult male mice aging 6-8 weeks were used. The mice were divided into 3 equal groups as, control, thiotepa (T group) and thiotepa + cetorelix, (T + C group). Thiotepa was injected as ip for 5 days at 2.5 mg/kg doses. In T + C group cetorelix injection was started one week before thiotepa treatment and continued for 3 more weeks. The mice in all groups were sacrificed 35 days after thiotepa injection. Testicular specimens were prepared for TEM studies.

Results: Study of Blood Testis Barrier (BTB) in control group is composed of three compartments: 1- Merged plasmalemma of sertoli cells, 2 - Endoplasmic reticulum in the sertoli cells, 3 - Actine filaments that lie between endoplasmic reticulum and plasmalemma of sertoli cells. In T group, BTB became dramatically thinner and irregular. There were also spaces between BL and sertoli cells. In T + C group BTB was similar to control group.

Conclusion: It is concluded that GnRH antagonist administration before cancer treatment could prevent the side effect of anticancer drugs.

Key words: Anticancer drug, GnRH antagonist, BTB.

P-119

Ultrastructural and microscopic study of GnRH potential in inhibition of side effect of chemotherapy drugs on myoid cells and diameter of seminiferous tubules in mice

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Introduction: Infertility problem affects 20 – 30 % of young couples. One of the known causes of spermatogenesis disorder is chemotherapy in patients with cancer which its side effect may last up to the end of the life. Since dividing cells are mainly affected by anticancer drugs, the aim of the present study is to investigate the preventive effect of GnRH on spermatogenic defect produced by anticancer drug.

Materials and Methods: In the present study 30 adult male mice aging 6-8 weeks were used. The mice were divided into 3 equal groups as, control, thiotepa (T group) and thiotepa + cetorelix, (T + C group). Thiotepa was injected as ip for 5 days at 2.5 mg/kg doses. In T + C group cetorelix injection was started one week before thiotepa treatment and continued for 3 more weeks. The mice in all groups were sacrificed 35 days after thiotepa injection. Half of testicular specimens were prepared for LM and others were prepared for TEM studies.

Results: microscopy showed that in control group myoid cells had smooth, large and euchromatic nucleus. In T group myoid cells had dense nucleus and have neumerous invagination that represents contraction of myoid cells. In T + C group myoid cells were similar to control group. LM study showed that mean diameter of seminiferous tubule were $190.16 \pm 13.15 \mu\text{m}$ in control, $132.93 \pm 7.02 \mu\text{m}$ in T group and $181.87 \pm 2.01 \mu\text{m}$ in T + C group. Statistical Analysis of data showed significant difference between control and T group ($p < 0.05$).

Conclusion: It is concluded that GnRH antagonist administration before cancer treatment could prevent the side effect of anticancer drugs.

Key words: Anticancer drug, GnRH antagonist, Myoid cells.

P-120

The effects of tadalafil medicines on Thyroid plasmic hormones (T3, T4) and TSH in male matured rats

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Introduction: One of the essential actions of human physiology is the regulation of thyroid hormones. According to various biochemical studies the early phase of thyroids disease are accompanied by changes in hepatic proteins. Also According to various one reason of the sexual dysfunction is thyroid hormones changes that decrease and increase of thyroid hormones effect on sexual activity In this research we examine the effects of tadalafil medicines(the drug for treatment of sexual dysfunction at men)on the hormones(T3,T4) TSH .

Materials and Methods: In this research 40 male matured rats from the Wistar group with the weight of 200 ± 10 have been participated in the

experiment, witness and control group. The experiment group was divided in 3 subgroups and medicine was given to them through mouth for 21 days with the amount of 75, 150 and 300 ml on kg. 0.2 ml of distilled water was given to witness group, but the control group did not receive any thing. At the end of 21 day blood sample was withdrawn from hearth ventral areas and density of T3, T4 and TSH hormones were measure by radioimmuno assay and before bleeding measure the weight of all groups and we test them with statically accounting of SPSS and T-test and also we consider the meaningfulness of different statistical result at the level of $p \leq 0.05$.

Results: The serum density of TSH hormone in experimental group in relation with control group was decline meaningfully 150,300(mg/kg) disulfiram. The density of T4 hormone in the experiment group does not show any meaningful differences with the control group. In addition the level's of T3 increased significantly in group receiving 150,300 (mg/kg) disulfiram. The effect of tadalafil medicines on body weight of animals is testing and we observe that the average of animal have meaningful decline in relation with maximum dose receiving group of tadalafil at the end of experiment at the level of $p \leq 0.05$.

Conclusion: The most effect of tadalafil medicines by neurotransmitter nitric oxide that cause of increasing of dopamine, oxytoxin, vasopressin and acetylcholine and by this way cause to decrease of TSH on the control group. Tadalafil administration have a inhibition role in iodine transport into the thyroid cells and increase the measure of T3. In other hand the biosynthetic pathway of deiodinase changes and the level of iodothyronine.

Key words: Tadalafil medicines, Thyroid plasmic hormones, Sexual dysfunction.

P-121

Evidence for establishment of androgen-dependent prostatic adenocarcinoma xenograft model in athymic nude mice

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Introduction: LNCaP is a human prostatic cell line that high-affinity specific androgen receptors are present in its cytosol and nuclear fractions.

Also estrogen receptors are demonstrable in cytosol. The model is hormonally responsive. Accordingly it may be of use for investigations as the significance of sex hormones in prostate adenocarcinoma.

Materials and Methods: Tumors were induced in athymic nude mice (8 weeks old) by injection of cultured LNCaP cells subcutaneously. The tumors were measured with calipers and the tumor volume was calculated. At the end of the study tumors were examined pathologically.

Results: The frequency of tumor formation following S.C. injection of 3.3×10^6 cells/animal was interestingly high. Also the tumors grew rapidly.

Conclusion: Prostate cancer is a very prevalent neoplasm in men. Androgens play an important role in prostate adenocarcinomas. As the results of this study indicated, LNCaP xenograft model provides an excellent opportunity for investigating on the effect of androgens in prostate adenocarcinoma.

Key words: Prostate cancer, LNCaP, Androgens, Athymic nude mice.

P-122

The Effect of lipid peroxidation on the human sperm morphology

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Introduction: Lipoperoxidation-derived aldehydes, such as malondialdehyde (MDA), are known to be a major factor in the etiology of defective sperm function. The objective of this study was to determine LPO effect on sperm morphology.

Materials and Methods: A total of 28 semen samples (age range 24-37 years) including 18 terathospermic patients (<14% morphology) and 10 normospermic men as control group were collected from IVF center of Fatemeh Zahra Hospital in Babol. Routine semen analysis was performed within 1h according to WHO (1999) guidelines. A hematoxylin-eosin staining method was used for determination of sperm morphology. Then, sperm and seminal MDA levels both groups, was assayed using the 2-thiobarbituric acid method and MDA levels was determined using the molar

absorption coefficient of the MDA at 534 nm 1.56×10^5 mol/L/cm.

Results: Our results showed that seminal MDA levels in patient group were significantly higher ($p=0.01$) than MDA levels in control group (mean \pm S.D; 0.75 ± 0.13 , 0.61 ± 0.11 nmol MDA/ml, respectively). But, sperm MDA levels not shown significant different between both patient and control groups (mean \pm S.D; 0.25 ± 0.03 , 0.25 ± 0.05 nmol MDA/ 10×10^6 spermatozoa, respectively). We also found a negative correlation between seminal MDA and sperm morphology but no between sperm MDA and morphology ($p=0.001$, $p=0.4$, respectively).

Conclusion: In general, MDA is a naturally genotoxic product induced lipid peroxidation of sperm membrane, by generating covalent adducts probably accumulates in seminal plasma and damage to spermatozoa structure and function.

Key words: Sperm morphology, Trastospemic men, Malondialdehyde, Lipid peroxidation.

3- Midwifery

P-123

Exploring the adolescent girls' attitudes toward fathers participation in their reproductive health matters

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Introduction: The processes of adolescent transformation, trigger insecurities and shocks to the psychic balance of girls, and frustration, confusion and conflict for the parents. A secure relationship between the two generations can provide solidarity, support, and positive adolescent adjustment. Although supportive fathers can play a large role in the reproductive health matters of their daughters, prevailing perceived culture, may discourage them from getting involved in this process. This study was conducted to explore the adolescent girls' attitudes toward fathers participation in their reproductive health matters in Damghan, Iran.

Materials and Methods: This was a qualitative study with a purposeful sampling which used focus group discussions method (FGDs) on 31

adolescent girls (16-18 years old) which were divided to three different subgroups in Damghan, Iran. We used a semi-structured questionnaire, allowing for new themes to develop. The sessions lasted an average of approximately seventy minutes. All of the FGDs were tape recorded, verbatim transcribed, and classified for analysis.

Results: Most of the participants believed that fathers can play an important role in their reproductive health. Some believed that fathers involvement may lead to extended interaction between them, increased knowledge about adolescent special needs and situations, and facilitating the help seeking without unnecessary worries, which are more common in the mothers. Nevertheless, most of the adolescents preferred indirect roles for fathers, in order to providing their privacy and to avoid feeling shy.

Conclusion: It seems that we need to overcome the idea that adolescent reproductive health is a mother's concern, and parents can be encouraged to deal jointly with such issues, according to their girl's preference.

Key words: Adolescent Girl, Father Participation, Reproductive Health.

P-124

The effect of reflexology on the anxiety status in nulliparous women

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Introduction: Labor conditions cause stress and anxiety specifically in nulliparous women and hence the chance of a normal vaginal delivery is reduced. Numerous of cesarean section because of fear labor pain in community, we should try to increase normal vaginal delivery. The purpose of this study was to investigate the effect of reflexology on the on anxiety status, blood pressure, pulse in nulliparous women.

Materials and Methods: The present study is an interventional study. The participants of this study were 70 nulliparous women (31 controls and 39 cases) with gestational age >37 weeks and cervical dilatation 3-4 cm, referred to labor room of Afzalipour hospital of Kerman who has signed the formed consent, and were enrolled in the study.

The reflexology group received reflexology for 20 minutes (each foot 10 minutes) on their feet and control group received massage 20 minutes on the other area of feet. Anxiety status determined before and after intervention by Spielberger questionnaire, and at the same times, pulse and blood pressure were measured before and after interference in two groups.

Results: anxiety status did not differ between the two groups before intervention. ($p=0.85$) After of intervention the means of anxiety status in the reflexology group was significantly lower than that in the control group ($p<0.001$), where as pulse ($p=0.44$), blood pressure ($p=0.59$) and labor out comes were similar to in two groups.

Conclusion: Reflexology reduces anxiety status in labor.

Key words: Reflexology, Anxiety, Nulliparous women, Pulse, Blood pressure.

P-125

The study of knowledge, attitude and practice of women working at Yasuj Hospitals regarding the papsmear test

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Introduction: Cervical cancer is one of the prevalent cancers of genital system and the second common cancer among women .About half a million women suffering from invasive cervical cancer are diagnosed throughout the world every year. 25.0% of women's mortality occur due to malignant tumor out of which, 18.0% is due to cervical cancer and in Iran its prevalence is 6.64%. The results of various studies show that .the rate of women participating in screening programs are varied in different groups. The aim of this research was to determine the knowledge, attitude and Practice of women working at Yasuj hospitals regarding the pap smear test.

Materials and Methods: This research is of KAP type and the samples were consisting of 60 married occupying women. Data were collected by accessible census method using four parts questionnaire. Its validity was confirmed using content validity and its reliability was confirmed by test retest method .the collected data were analyzed using SPSS soft ware, dispersion statistical indices, coefficient correlation and test.

Results: the results showed that, 53.3% of samples were 94-30 years old .61.7 % had B.SC. and 48.3% were nurses. 48.3% had no pregnancy history and the university periods were the main information source regarding Pap smear in 66.7 % of cases. 76.76% possessed good and excellent knowledge and regarding attitude for doing Pap smear test, 84.76% of them had positive attitude, while 63.3% of samples had not done the test and 70.0% of them recommended all women to do it.

Conclusion: Most of women possessed excellent knowledge and had positive attitude to do the test but, had a weak practice. Meanwhile, most of them had not done the test at all and none of them did it regularly. Therefore, based on the result of this study and comparing it with other studies, the necessity of recommendation by physicians to do pap smear as a suitable tool for Screening, paying more attention to develop the knowledge level of the society by public communications and lay emphasis on that, having no signs is not a reason for not doing pap smear test, etc. are suggested.

Key words: Knowledge, Attitude, Practice, Women, Pap smear.

P-126

Prevalence and predisposing factors of post traumatic stress disorders after childbirth in Bushehr, Iran

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Introduction: Childbirth is potentially traumatic event in the lives of women and children can be provoked intense feeling and excitements that induce stress disorder in some women. The current study aimed to determine the prevalence and predisposing factors of post traumatic stress disorders after childbirth in Bushehr.

Materials and Methods: This study was cross-sectional analytic. Subjects selected by simple sampling from postpartum women who attended the 6-8 week referred to health medical centers ($n=400$) and for women with traumatic delivery completed posttraumatic symptoms scale-I (PSS-I) and predisposing factors questionnaire. Finally, two group of affected non affected PTSD assessed about predisposing factors by chi-square statistical test and fisher's exact test with $p=0.05$.

Results: Results of this study showed that five in four percent women reported a traumatic delivery and one-third of them affected to PTSD after childbirth and between obstetrical factors include: complication in pregnancy, desire of mother and father to recent pregnancy, post partum complications, interval of pregnancy less than 2 years, neonatal factors include: type of feeding, problems that related to child care, birth weight, psychological factors: stressful life events, number of stressful life events, maternity social support with PTSD were significantly, ($p<0.05$). Of demographic factors that related to PTSD were including: Income sufficiency, Income amount ($p<0.05$).

Conclusion: Some of obstetrical, neonatal and mental variables are associated with occurrence of PTSD after childbirth must be preventing with recognition of disposed mothers from the occurrence of this disorder.

Key words: Post-traumatic stress disorder, Predisposing factors, Post partum stress disorder.

P-127

Prevention of premature rupture of membranes and preterm labor in Shiraz, Iran

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Introduction: To evaluate the effect vitamin C supplementation on premature labor and rupture of membranes in Shiraz, Southern Iran.

Materials and Methods: In this study, 130 pregnant females at 20 weeks of gestation were selected and were randomized into two groups of case group who received vitamin C (100 mg/day) and the control group who received placebo until the 36th week. Every 4 weeks, each subject was evaluated for bacterial vaginosis.

Results: Among 117 subjects who participated in the study; premature rupture of membranes was observed in 8.77 % of the case group versus 36.67% in the control group ($p<0.001$). In the case group, 7.41% and in the control group 20.56% of the subjects had delivered due to premature rupture of membranes in term.

Conclusion: Vitamin C supplementation is suggested for decrease of premature rupture of membranes and preterm deliveries.

Key words: Vitamin C, Premature rupture of membranes, Preterm delivery, Southern Iran.

P-128

Reproductive factors related to cancer of the breast, before and after menopause; among women referring to health centers in Tehran, 2005

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Introduction: Evidence shows that after from genetic susceptibility, endogenous and exogenous hormones are the main risk factors for breast cancer.

Objective: To find out those reproductive factors to incidence of breast cancer overall and by menopausal status.

Materials and Methods: This was a case – control study, in which, the risk of menstrual, pregnancy-delivery and menopausal factors were determined in women with breast cancer (case) against those without (control). The risk factors stratified by menopausal status also. A total of 500 women, diagnosed with breast cancer, (250 in premenopausal and 250 in post menopausal status), were selected from Shohada Hospital and cancer institute in Tehran, and 500 women as controls visiting patients at the same time or living next door to cases.

Results: Results showed that early menarche ($OR=17.26$, $p=0.000$), breast feeding less than 3 months in life ($OR=2.73$, $p=0.000$) are overall risk factors for breast cancer and both at pre ($OR=15.61$, $p=0.000$ and $OR=1.77$, $p=0.000$), and postmenopausal ($OR=0.05$, $p=0.003$ and $or=0.28$, $p=0.001$). Menstrual interval less than 26 days, and irregular menstruation period was related to breast cancer ($OR=0.30$, $p=0.000$ and $OR=2.39$, $p=0.026$ respectively) and in premenopausal period ($OR=0.25$, $p=0.000$ and $OR=2.71$, $p=0.017$ respectively). On the other hand, irregular menstrual period in the age of 30, time interval more than 20 years between menarche and first pregnancy were related to breast cancer ($OR=18.66$, $p=0.000$ and $OR=0.45$, $p=0.000$ respectively). We also found that two mentioned variables were risk factors of breast cancer in post menopausal period ($OR=0.02$, $p=0.000$ and $OR=2.85$, $p=0.000$ respectively). This study showed that overall, cancer of the breast is statistically related to scanty menstrual bleeding ($OR=1.72$, $p=0.000$) and occurrence of first pregnancy after age of 20 ($OR=2.40$, $p=0.000$),

history of post term delivery (OR=3.15, p=0.038), history of 2 spontaneous abortion (OR=2.16, p=0.043), history of induced abortion (OR=2.03, p=0.018), and the usage of oral contraceptive pill more than 5 years (OR=0.40, p=0.001) were only related to premenopausal breast cancer. It was also shown that, dysmenorrhea (OR=2.24, p=0.027), marital age after age of 30 (OR=3.79, p=0.011), hot flashes at menopause (OR=0.32, p=0.004) and occurrence of menopause after the age of 55 (OR=3.84, p=0.000) were only related to breast cancer of post menopausal status.

Conclusion: Regarding our results the age in which the disease is diagnosed is a prominent point for some factors. It can be assumed that the most important factors are irregular menstruation at the age of 30 for both pre and post menopause. Meanwhile, early menarche for premenopausal breast cancer and menopausal age for post menopausal breast cancer were considered to be the most important factors.

Key words: Breast Cancer, Reproductive Factors, Age of diagnosis.

P-129

The effects of foot reflexology educational program on fatigue in menopausal women

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Introduction: Regarding to increasing of life expectancy, women spend about one-third of their lives in menopausal stage. Many women are interested to use complementary and alternative medicines for relief from their menopausal complications. Fatigue is one of major menopausal complications. Reflexology is one of the complementary and alternative medicines. The purpose of this study was to determine the effects of Reflexology educational program on severity of fatigue in menopausal women.

Materials and Methods: This randomized controlled trial study was carried out on 100 retired menopausal women ranging from 45 to 60. They were randomly divided in two groups as case and control. Data collection tools were questionnaire and checklist. Questionnaire consisting of demographic characteristic, and 10 cm Visual Analogue Scale (VAS) that was applied for measuring severity of fatigue. Case group education was accomplished by utilizing an

educational booklet and holding two sessions (average length of each 120 minutes) with a lapse of two days between them. Sole reflexology was performed for 15 minutes, daily (at least thrice a week) through 30 days, while there was no intervention in the control group. Statistical analysis was done by SPSS, and using chi-square, exact Fischer, Mann-Whitney U and Wilcoxon tests.

Results: There was no significant difference in demographic and the menopausal complications such as fatigue between two groups before intervention. In case group the results showed a significant reduction in severity of fatigue after intervention (p<0.001).

Conclusion: educational program of Reflexology is effective in reduction of fatigue and therefore midwives can learn and teach it to menopausal women.

Key words: Reflexology, Education, Fatigue.

P-130

Investigating the vulvodynia symptoms in women referred to Gynaecology Clinics of University of Medical Science in Shiraz in 2009

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Introduction: Itching, pain and sensitivity Vulva the most common complaints is gynecologic. Vulvodynia have afflicted about two hundred thousand women in the United States. Unfortunately, there is a little information about syndromes which make disease. Like most of the multi – factorial syndromes, diagnosis of other causes through the Rejection infectious, neoplastic traumatic comes. The chronic disorders may be one of the somatic sexual dysfunction is psychological or mental. Method to deal with diagnosis and treatment, with clinical improvement is most likely cause.

Materials and Methods: This study is a cross-sectional study on the 30 women referred to clinics with symptoms of Vulvodynia's disease was studied.

Results: The results obtained more than 60 percent of women with pain Vulva infection (those with at least 3 of 5 Director) high discharge, smelly discharge, burning, itching and dyspareunia) with infection was considered so between pain, though

the itching, burning and pain when a close relationship was significant. Also was observed that the vulvodynia cause irritability and low sleep was at night.

Conclusion: Vulvodynia with women with chronic pain have no known cause. Many women because no response in the treatment of physicians regularly visit community organizations. Since the cause of most Vulvodynia, vaginitis and infection. Are it seems that these diseases should be on the first screening of an infection occurs after treatment was necessary if the response to treatment and payment Vulva main pain is important that the awareness about conditions and pay their status studies larger study physical examinations and medical files to the roots of this disease.

Key words: Sensitivity Vulva, Gynecologic, Sexual dysfunction.

P-131

Practice of midwives working at midwifery offices toward performance of professional standards and effectiveness of continuous evaluation and education in Shiraz in 2007

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Introduction: The most important aim of health program is health of population for getting this aim professional standards education as well as evaluation and assessments on providers have an important role. The purpose this study was survey midwives' Practice of working at midwifery offices toward performance of professional standards and effectiveness of continuous evaluation and education on them.

Materials and Methods: This study is an interventional study in which all of midwifery offices (53) were researched. The study was done in three processes that Standard check list were completed each process after interview, observation, control and assessment of midwives, functions. Then datum is collected and analyzed.

Results: Overall mean score of fault at midwifery offices decreased from step 1 to step 3 in these fields: environmental health and infection control ($p<0.0001$), personal and patient care ($p=0.003$), individual health ($p=0.03$) and obey of laws and rules ($p<0.0001$).

Conclusion: Along with all standards education, continuous evaluation on people's function is

necessary till faults and deficiencies were observed and resolved as soon as possible that educational programs succeed consequently.

Key words: Midwifery offices, Professional standards, Education, Evaluation.

P-132

Outcomes of perineal massage during childbirth

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Introduction: Perineal support during childbirth and prevention perineal trauma is one of the goals of modern midwifery and midwives' tasks. Episiotomy which has been designed in order to reduce the perineal trauma, have many complications such as bleeding, pain and etc. This study has been done to determine effect of perineal massage on perineum outcomes during childbirth.

Materials and Methods: This is a randomized clinical trial and has done on the ninety low risk nulliparous women in experimental and control group. For experimental group performed swiping and revolving perineal massage with Vaseline. Control group received routine care. Consequences were recorded after childbirth.

Results: This study showed that: rate of intact perineum and first- degree tears in experimental group is higher (60%) and rate of episiotomy and second- degree tears is lesser (40%) than control group. Square test showed significant difference between two groups ($p<0.001$). Third and fourth-degree tears was not seen.

Conclusion: Perineal massage with Vaseline reduces episiotomy and second -degree perineal trauma and increases intact perineum and first-degree perineal tears. It is suggested perineal massage in second stage of childbirth perform by midwives for reduce perineal trauma.

Key words: Perineal tear, Perineal massage, Childbirth.

P-133

An essay concerning sexual domestic violence and its impact on female depression

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Introduction: Domestic violence is one of the common causes of physical and emotional trauma to women. Based on World Bank report the consequences of rape and domestic violence between 15-44 years old ladies are more injurious than breast and uterine cancer and accidents ,additionally it can influence on future generation directly and indirectly.

Materials and Methods: This study is a cross sectional survey.811 women recruited to study who referred to family health clinics of four parts of Tehran (North, South, West, East) by using stratified-cluster sampling method. Structional interview was the method of data collection. Questionnaire included: 1-demographic information of women and husband, 2-Beck depression inventory and 3- screening questions of domestic violence. SPSS was used for data analysis.

Results: In this study, the prevalence of sexual domestic violence and depression were 39.1% and 37.1%, respectively, χ^2 and Fisher exact test indicated a significant association between domestic violence and a number of variables such as: marital age of couple, husband's education, History of abortion, husband's smoking, women and husband's psychological disorders. However the association was not significant with other variables. χ^2 test indicated beck score was positively and significantly correlated with sexual abuse ($\chi^2=58.501, df=1, p=0.000$).

Conclusion: The rate of sexual domestic violence and depression in this research were relatively high. Consideration to undesirable outcomes of violence and relationship to depression, since intervention can result to decrease domestic violence and its consequences, routine screening women regarding to violence experience and depression through an organized planning will recommend.

Key words: Domestic sexual violence, Depression, Women.

P-134

Maternal C-reactive protein levels in early pregnancy and occurrence of premature rupture of membranes

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Introduction: To determine the relationship between C- Reactive Protein levels of first trimester with occurrence preterm rupture of membrane.

Materials and Methods: In this prospective cohort study, we measured serum CRP levels in 400 pregnant women in their first 20 weeks of gestation by immunoturbidometric assays with photometric analyzers. The subjects all had singleton pregnancies without any history of diabetes, hypertension, renal or cardiac disease or systemic infection before conception, and they were all followed up to delivery.

Preterm rupture of membrane, rupture of membrane before 37 gestational weeks was defined.

Results: After controlling for the effects (regression logistic analysis), social- economic status, history of preterm rupture of membrane, working of mother, white blood cell more than 12000 per mm and CRP, significant relationship was found between CRP and preterm rupture of membrane (p-value=0.000, OR=1.23, %95 CI=1.11-1.37). However, there was no significant relationship between CRP levels with other's factors. CRP effective levels in preterm labor and preterm rupture of membrane use from Roc curve with %81 sensitivity, %64 specificity was 3.45 mg/l.

Conclusion: It seems that the inflammatory marker CRP can be used to identify women who are at high-risk for preterm rupture of membrane, but larger studies are needed to establish this relationship definitively.

Key words: CRP, Preterm Rupture of Membrane, Prenatal care.

P-135

An investigation on the effect of iron supplementation in pregnant women with hemoglobin higher than 13.2 g/dl on their infant's status

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Introduction: There are numerous evidences that show consumption of iron supplementation has remarkable positive effects on iron status in pregnant women at their delivery and after that. On

the other hand, there are many researches revealing the relation of higher level of hemoglobin with increased risk of small for gestational age, still birth, pregnancy induced hypertension, intrauterine restriction, low birth weight, preterm birth and perinatal death. In these cases, it seems that normal increase of blood volume in pregnancy has been decreased. The aim of this study was to survey the effect of iron supplementation in women with hemoglobin concentration higher than 13.2 g/dl in the 13rd and 18th weeks of pregnancy on their infant's status.

Materials and Methods: In this retrospective study, we investigated the medical files of mothers and their infants (that had special conditions of the study) in six education hospitals (Hazrat Zeynab, Maryam, Najmieh, Lolagar, Baghiatallah and Shariati). The sample size was 725 pregnant women with hemoglobin concentration higher than 13.2 g/dl in the 13rd and 18th weeks of pregnancy. They had already been randomly selected and divided in into two groups of case (432) and control (293). The case group consumed one ferrous sulfate pill (containing 50 mg iron) daily from the 20th weeks of pregnancy up to the end of pregnancy and the control group consumed placebo. At the beginning, the two groups were matched in terms of age, social economic situation, parity, previous adverse pregnancy outcomes, body mass index, distance of the last pregnancy with the present one and hemoglobin concentration.

Results: The results revealed that routine consumption of iron supplementation by the pregnant women with hemoglobin concentration higher than 13.2 g/dl in comparison with the control group significantly increased low birth weight (less than 2500 gr) ($p=0.007$), jaundice ($p=0.006$) and polycythemia ($p=0.046$) in their neonates. Further, the mean of hemoglobin concentration in the neonates of the case group (16.37 ± 1.87) was significantly ($p=0.0001$) higher than that of the control (15.46 ± 1.83).

Conclusion: It seems that consumption of iron supplementation by women (with hemoglobin concentration higher than 13.2 g/dl) during pregnancy will expose their neonates to increased risk of low birth weight, jaundice and polycythemia, probably due to lack of suitable blood hemodilution and ultimately damage of utero-placental circulation.

Key words: High hemoglobin concentration, Iron supplementation, Neonatal jaundice.

P-136

Meeting the reproductive health care needs of youth in Qom's universities

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Introduction: Reproductive health of youth is one the most unknown aspects in our community. With regard that the half of active population in community are women, this investigation was done with goal the evaluation reproductive health that provided to youth and their attitude and knowledge about reproductive health.

Materials and Methods: The descriptive–correlation study done in 2008. Inclusion criteria was desire to participate in this study that 400 non-medical students were examined. Instrument was questionnaire that its reliability and validity is approved based statistical counselor. Question contained student's opinion about reproductive health care, their knowledge and attitude in reproductive health. Data analyzed with use descriptive and analytical methods and SPSS 16.

Results: Mean age (\pm SD) was 21.82 ± 1.14 . The most of student were in B.S degree (97.5%) and educated in human science (44.8%). The results of this study showed that only in 12.2%, total knowledge about reproductive health was in favorable level. Knowledge about sexual health is not desirable in 72.9%. Knowledge about ADIS and sexual disease in 28.4% and about family planning only in 14.4% was favorable. There is a positive significant correlation between knowledge and attitude about reproductive health ($r=0.30$, $p<0.001$). The most of students believed that reproductive health education about sexual health (80.1%) and mental health in prenatal period is prevailed and the lowest (40%) related to premarriage consultation. About time of offering reproductive health education, 66.7% believed that time of ratification in university is best. The students say that the most of their information sources is satellite (87.3%) and internet (86.1%) and lowest source (57.7%) is health stuff. Only 22.6% believed the best way of prevent of unwanted pregnancy and sexual disease is uniformed youth.

Conclusion: With regard to bulletin of International Development and Human conference that 'access to information and services related to reproductive health is right of youth that government should be provided this suggested that reproductive health program and activities have offering education and information to youth.

Key words: Reproductive health care, Knowledge, Attitude.

P-137

The effect acupressure on liv3 point on quality of life in girls with primary dysmenorrheal in Tehran Tarbiat Moallem Center in 2008

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Introduction: Dysmenorrheal affects on quality of life's women moreover it resulted physical, mental, social and economical problems. The aim of this study is evaluation of effect acupressure on liv3 point on quality of life in girls with primary dysmenorrheal.

Materials and Methods: A clinical trial conducted in 194 Nasibe Tarbiat Moallem center's students that they had inclusion criteria. In first cycle we determinate severity and duration of pain and quality of life. Therefore the participates randomly allotted to either experimental or control group. In second, third and firth cycle did acupressure at liv3 and placebo point during 3-7 day before menstruation for 20 minute. In firth cycle, participate completed SF-36 questionnaire after menstruation again. Instruments were used include: wrong-Baker faces pain scale, Beck -21 questionnaire, SF-36 questionnaire, clock, Acuhealth tens pro 900 set, force gauge. Data analyzed with SPSS 16 and χ^2 test, Man Whitney U, independent and paired test.

Results: There was no significant difference in mean quality of life dimension between two groups in first cycle ($p>0.05$) but there was a significant difference in mean quality of life dimension between two groups in forth cycle ($p<0.05$). The comparison between firth and forth cycle in two group showed a significant difference in all

dimension ($p<0.05$) but there was no significant difference between two cycles in Role Emotional functioning dimension in experimental group ($p>0.05$) and not significant difference between two cycles in Role Emotional functioning and social functioning dimensions in experimental group ($p>0.05$).

Conclusion: Acupressure on liv3 point is suggested as useful, effective, cheap and available treatment for primary dysmenorrheal.

Key words: Acupressure, Quality of life, Primary dysmenorrheal.

P-138

Maternal and cord blood lead and selenium levels at delivery and their relationship with Premature Rupture of Membranes (PROM) occurrence

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Introduction: To study the relationship of maternal and cord blood levels of lead and selenium at delivery with PROM occurrence.

Materials and Methods: This was a cross-sectional study on 58 pregnant women attending Tehran Lolagar Hospital for delivery. Premature Rupture of Membranes (PROM) was defined as rupture of membranes before the beginning of contractions. After completion of a general questionnaire, 1.5 cc heparinated blood samples were obtained from both mother and cord, all samples were maintained in -20 C and transferred to the lab and were analyzed by atomic absorption method. SPSS software V.15 was used to enter and analyze data.

Results: Of 58 subjects, 9 (15.5%) developed PROM. Of the potential effective factors on PROM such as gravidity, mothers age, previous PROM and mothers outdoor job along with blood level of lead and selenium in mother and cord entered in logistic regression model, only mothers selenium blood level (odds:0.74, 95%CI:0.57-0.96) and mothers age (odds: 0.72, 95% CI:0.52-0.99) had statistically significant relationship with PROM. According to obtained ROC curves the cut-off point level of selenium for PROM occurrence with 89% sensitivity and 61% specificity was 23.5 $\mu\text{g/dl}$.

Conclusion: There was no significant relationship between mothers and cord blood levels of lead with PROM but there was a significant inverse

relationship between mothers blood level of selenium with PROM. According to previous studies and also this one, mother's selenium level may have a protective effect on PROM occurrence.

Key words: Selenium, Lead, Prom.

P-139

The relationship between maternal serum magnesium level and preterm birth

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Introduction: Preterm birth is one of the obstetric problems which define as birth occurring after 22 weeks of gestational age and before 37 weeks. Due to Magnesium Sulfate mechanism of action to inhibit uterine contractility and using to prevent preterm labor, we evaluated the relationship between Maternal Serum Magnesium Levels and preterm birth.

Materials and Methods: This Nested case-control study carried out on 20 with preterm birth and 20 women at term birth at Imam Khomeini Hospital in Sari/ Iran in 2008. The women with singleton gestation and intact fetal membrane suspected to preterm labor (case group), 10cc blood samples were drawn into syringes and sent to laboratory of the hospital immediately. Sampling for control group was same as the case group. These samples recognized as control group just as birth occurring after week 37. Finally, serum magnesium level measured. Data analyzed using χ^2 , t- test and OR (Odd's Ratio).

Results: There was a relationship between the number of prenatal visits ($p=0.008$) and stressful events associated with preterm birth ($p<0.02$). Serum magnesium level was associated with preterm birth OR=4.75, CI 95% = (0.48- 46.91), Sensitivity, specificity, positive and negative predictive value of serum magnesium for preterm birth was 95%, 50%, 66.5% and 83.33% respectively.

Conclusion: Although there was a correlation between serum magnesium levels and preterm birth, due to methodology of the study, a cohort study with the same cut off point and supplementation of magnesium in RTC studies is recommended.

Key words: Preterm birth, Magnesium Sulfate, Maternal Serum level.

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The role of peer groups in adolescent girls reproductive health: A qualitative study on mothers' attitudes

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Introduction: Adolescent reproductive health is a special concern, because they are a hard to reach group with special reproductive health risks, less information, less experience, and more socio – cultural barriers to access to health care. Since the mothers' positive attitudes may facilitate the peer group's education in their daughters, this study was conducted to explore the mothers' attitudes toward the role of peer groups in adolescent girl's reproductive health.

Materials and Methods: This was a qualitative study with a purposeful sampling on 31 mothers who have at least one adolescent daughter (16-18 years old). They were studied in three different subgroups in Damghan, Iran: having secondary formal education, graduated in higher education of non – medical branches, and graduated in higher education of medical branches. Applying a semi-structured questionnaire, we used focus group discussions method. All of the FGDs were tape recorded, verbatim transcribed, and classified for analysis.

Results: The most positive attitudes toward peer groups were observed in p mothers who were educated in medical branches, although some of them preferred the arranged peer group relationships, with a little older adolescent or adult girls. The secondary education group didn't believe the peer groups positive roles; whereas the non-medical group had divergent attitudes; compatible with medical group in some cases and with another group in the other ones.

Conclusion: It seems that we face with divergent attitudes toward peer groups role in adolescent reproductive health, and there is a need to individualize our educational programs. Also we need to produce some successful experiences to divert the opposed beliefs.

Key words: Adolescent Girl, Peer Group, Reproductive Health.

P-141

**Menopause phenomenon as an experience:
A qualitative study**

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Introduction: Although reproduction ability terminates when menopause occurs, it has been considered as a new period of women's life. Woman's condition perception from this transition stage based on cultural manner, social factors and personal knowledge about menopause. The aim of this study was to explore lived experience of Iranian menopausal women.

Materials and Methods: Participants were selected based on their understanding about the phenomenon under study. Fourteen women participated in this study because with this number of samples the data was saturated. Participants were interviewed about their experiences, and their words were transcribed.

Results: The most important theme emerged from lived experiences of menopausal women was "ending a period, starting another one, physiologic event and believes, feeling description. Thirteen sub themes manifested including end of point, limitation's elimination, getting rid of periodical challenges, starting worry about sex, comparing changes, replacing, taking information, natural creation's process of admission, facing alertness, hopelessness to future.

Conclusion: The findings revealed that women's experience was various about menopause. Some of them explained it as freedom from problems of fertility period and the others were anxious about complications. Whatever women's experience about menopause, the health care of this period should not be ignored.

Key words: Menopausal experience, Qualitative study, Phenomenology.

P-142

**The study of relationship between pre
induction cervical dilatation and induction
success**

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Introduction: Cervical assessment using Bishop Score system, is the most common method to evaluate the success of induction (vaginal delivery), but considering the large number of components and subjectivity of some of its criteria there is still concerns about its accuracy. As measuring one criterion is more accurate and has less measurement error, this study was carried to examine the relationship between pre induction cervical dilatation and induction success.

Materials and Methods: This is a descriptive analytic study included 175 healthy pregnant women at term (37-42 weeks) with a singleton fetus, intact membranes and cephalic presentation who were recruited randomly when present to Shahid Mobin hospital of Sabzevar and underwent induction of labor for different reasons between January 2007 and April 2008. The data collection instrument was a data record forms including: demographic characteristics, cause of induction, gestational age and ... with information on vaginal examination at the beginning of induction and delivery outcome data. The data were analyzed with descriptive statistic, Chi-square and logistic regression tests.

Results: 59 cases of labor induction (33.7%) resulted in failure induction (cesarean section), the most common cause of induction (41.1%) was post date pregnancy (beyond 40 weeks) and the most common cause of unsuccessful labor induction was the failure of labor to progress (45.1%). Among other predicting factors (effacement, station, parity, gestational age, and birth weight), in logistic regression analysis dilatation of cervix at the beginning of induction was the only independent, significant predictor of induction success (OR=2.55). Induction success rates improved with progressive cervical dilatation, with a cesarean delivery rate of 70% at 0 cm, 35/7% at 1 cm, 24/3% at 2 cm, and 10.5% at 3 cm dilatation.

Conclusion: Among all variables studied, only cervical dilatation factor was significant predictor of induction success.

Key words: Labor induction, Predicting factors, Induction success, Cesarean section.

P-143

Comparison of domestic violence in self burned and accidentally burned patients hospitalized in a burn center in Shiraz

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Introduction: Domestic violence is one of the most important issues affecting physical and mental health of women. Internalization of violence in the form of self burning is the problem evident in different countries such as Iran. This study was conducted to find out the status of violence in self burned and accidentally burned women,

Materials and Methods: 69 patients hospitalized during a 9 month period in Shiraz burn center due to self burning (29) or accidentally burned (40) were interviewed using a valid and reliable questionnaire which consists of demographic data and violence related questions. Using SPSS 11.5 data was analyzed.

Results: findings of the study revealed that these two groups differed from each other in the following variables: No of children, husband's education level, and drug abuse.

Mood disorder, interfere of family, experiencing a recent crisis and commonly occurrence of physical violence in their own or husband's family. Furthermore violence was reported in self burned group more than in accidentally burned group.

Conclusion: Although all types of violence have been reported in both, groups but this was higher in self burned group. Health care providers and administrators should pay attention to the problem of domestic violence, the ways to prevent and diminishing its occurrence and consequences.

Key words: Violence, Burning, Mental health.

P-144

The role of dietary and reproduction as predictors of age at menopause and reproductive span

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Introduction: The timing of natural menopause is a risk factor for breast cancer. Women who

experience later natural menopause have higher rates of breast cancer. Also, early menopause promotes bone loss. Thus age at menopause has implications for the health of postmenopausal women. Physical activity, smoking, parity, nutrition are a predictor for onset of age at menopause.

Materials and Methods: Study participants were 500 women aged 40 to 70 who experienced menopause. Milk, vegetarian, rice, intake and early menarche, smoking, activity, breast feeding assessed by questionnaire. We were used to estimate the effects of dietary, physical activity, smoking, breast feeding on age at menopause.

Results: This study showed early menarche, younger age at first live birth, longer duration of breast feeding, and higher parity were associated with longer reproductive years. ($p<0.01$) Also physical activity and higher body mass index predicted later menopause ($p<0.01$). Total intake fruit, vegetable, rice, bread was positively associated with later menopause. ($p<0.05$) Smoking was inversely associated with both early age at menopause and shorter reproductive span.

Conclusion: Reproductive factors, intake of fruits, uses smoking, physical exam influenced the onset of menopause. So suggestion with changed in life style and intake appropriate nutrition can prevention of complication in menopause as cancer or prevention loss bone in earlier menopause.

Key words: Menopause, Reproductive, Physical activity.

P-145

The influence of obesity and diabetes on the risk of cesarean section

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Introduction: Pre gestational obesity is a known risk factor for complications of pregnancy such as diabetes, preeclampsia and hypertension, macrosomia and cesarean delivery. The purpose of this study was to evaluate the independent influence of pre gravid obesity and diabetes on the occurrence of primary cesarean delivery. This study is cross-sectional and was in years 1385-1388.

Materials and Methods: In this study patients were characterized by pre gravid BMI and divided into obese ($BMI >30\text{kg/m}^2$) and overweight ($BMI 25.1\text{-}30\text{kg/m}^2$) and normal ($BMI 19.8\text{-}20\text{kg/m}^2$) maternal diabetes was divided into (A1) group that

treated with diet alone, (A2GDM) group that treated with insulin and after group was (PDM) or pregestational diabetes. The influence of pregravid obesity analysed with some of variables diabetes, macrosomia and cesarean delivery.

Results: Complete records for 300 women were included. Results showed, 120 women were overweight, pregravid obesity affected 80 women (50%) diabetes affected 6% of pregnancies (A1GDM), 0/2, 20 women (A2GDM), 0/8 and 10 (PDM) ,1%. When compared women with normal pregravid BMI, the risk of cesarean section was higher in obese ($p<0/0001$) and fetal macrosomia was another risk factor for cesarean section, also showed relationship between obesity and A2GDM and cesarean section ($p<0/0001$).

Conclusion: Pregravid obese and diabetes is known as risk factor for cesarean section.

So obesity is predictor for diabetes that it is cause of macrosomia in neonate and macrosomia is risk factor for cesarean section. So, as education program in pregravid for control of obesity and screening in pregnancy complications.

Key words: Obesity, Diabetes, Cesarean section.

P-146

Be serious with infertile women's stress

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Introduction: In the past few decades, new and more efficient techniques to help solve fertility problems have become widely available throughout the developed world. Women who were treated with ART usually are depressed and anxious because of infertility and its unknown treatment. There is substantial initial evidence that the psychological disposition of the parents-to-be influences their fertility and thus the outcome of fertilization techniques. Psychological pressure and associated negative status, such stress, can be threat for ART outcome. However, the accumulating evidence points to the need to program medical fertility treatment, bearing in mind both chronic and acute stress levels, and to

treat for their reduction before commencing the (actual) fertility treatment. This overview article aimed to assess exist reasons for treatment of infertile women stress prior of assistance reproductive technology.

Materials and Methods: In this overview study, we exclude 20 related articles about psychological intervention for decreasing infertile women's stress and its effect on treatment outcome, and then we select 12 better articles. After careful study, we gather reasons for treatment of infertile women stress prior of assistance reproductive technology.

Results: Ethical and technical reasons exist for stress management before fertility treatments.

1- There is ample evidence that lower stress levels mean better female and male natural fertility, though there is as yet no conclusive experimental evidence that lower stress levels result in better fertility treatment outcome. However, first reducing stress may diminish the number of treatment cycles needed before pregnancy is obtained, may prepare the couple for an initial failure of treatment or even make the more invasive techniques unnecessary.

2- Invasive fertility techniques such as IVF, ICSI and gamete intra-Fallopian transfer (GIFT) present a problem for practicing Catholics and persons with the belief that conception is not to be meddled with attempts to favor male and female fertility with non-invasive methods do not qualify as meddling with fertility and should, therefore, be acceptable for persons with these beliefs. A more general reason is that if psychology can help to solve infertility, then psychology should be applied as a first option and before more invasive steps are taken.

3- The economic cost of infertility treatment is high. An effort must be made to reduce that financial burden. If the number of treatment cycles or maybe the treatment itself can be limited or deemed unnecessary through better fertility on account of a primary reduction of acute and/or chronic stress, then that should be the guideline for private and public institutions alike.

4- To the biologist and laboratory technician, being in control of a fertility treatment requires that the number of biological variables be as low as possible. As we have seen, stress results in changes in a number of variables that are difficult to preview or control. It may result in biologically measurable variations, but not necessarily so. The changes may be measurable in one location but show no change in another. Stress may result in psychological indicators that could correlate with biological changes but not necessarily do so. Stress

may result in increases of a substance in some cases but in other cases will decrease the levels of that same substance. Thus, from a technical point of view, the treatment cycle and its individual components will be under better control if the exogenous influences caused by chronic or acute stress are reduced or eliminated before the treatment cycle.

Conclusion: physician should establish stress levels with the help of validated questionnaires or refer to a psychologist after preliminary diagnosis of infertility. For both females and males, the short-term goal should be to reduce the patient's feeling of helplessness, by means of including advice on coping with infertility, changes in sexual behavior, modification of negative cognitions related to infertility, overcoming deficiencies in knowledge about fertility and improving marital communication skills.

Key words: Stress, Infertility, ART, Psychological intervention.

5- Other

P-147

Comparing the cycle characteristics of CC with CC+HMG in PCOS and non PCOS infertile patients

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Introduction: This study compares the cycle characteristics of CC with CC+HMG in PCOS and Non PCOS infertile patients.

Materials and Methods: Patients were treated by CC + minimal HMg protocol. The cancellation rate, the mean number of different follicle sizes and endometrial thickness and pattern were compared.

Results: The cancelled cycle due to nonresponsiveness were significantly higher in CC compared to CC+ minimal HMg protocol. PCOS patients are significantly nonresponsive in CC cycle and hyperresponsive in CC+ minimal HMg cycles. The mean number of different sizes of follicles and the endometrial thickness were significantly higher in CC+ minimal HMg. PCOS patients were significantly different from non PCOS regarding the number of mature follicle and endometrial thickness. The pregnancy rate was 11% (10.2% in non PCOS and 12.2% in PCOS).

Conclusion: CC+ minimal HMg is a viable alternative to HMg /FSH only protocol in CC failure or resistant patients, and its efficacy can be mostly attributed to improvement of endometrial quality and increase in follicle number. Moreover, due to high cancellation of PCOS patients treated by this protocol, seemingly other alternatives should be found; perhaps sequential Letrozole+HMg/FSH that have been shown to improve the ovarian response in this group of patients.

Key words: Cycle characteristics, PCOS, CC, HMG.

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Ovarian hyperstimulation syndrome in two spontaneous pregnancies

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Introduction: To present two cases of ovarian hyperstimulation in spontaneously conceived pregnancies. Ovarian hyperstimulation syndrome (OHSS) occurs mainly after excessive stimulation of the ovaries by exogenous gonadotropins administered in the context of ovulation induction and in vitro fertilization procedures (iatrogenic OHSS). OHSS not related to ovulation induction is rare

Materials and Methods: case report. In this case report, we are going to present two cases of OHSS occurring in spontaneously conceived pregnancies. One of these patients had a history of this syndrome in her sister and the other confronted with this syndrome in her second pregnancy.

Results: Thrombophilia work up, Tumor markers, renin-aldosterone and thyroid function tests are normal.

Conclusion: Mutation of the FSH receptor, LH receptor, or aromatase genes may be considered in the pathogenesis of OHSS in spontaneous pregnancy.

Key words: Iatrogenic OHSS, Pregnancies, Gonadotropins administered.

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The complaints of patients following tubal ligation

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Introduction: Tubal ligation is one of the methods of contraception which is highly effective. This method has complications as other methods of contraception. The aim of this research was determining frequency distribution of patient's complaints after tubal ligation.

Materials and Methods: In this research the women who submitted to Zahedan - Aliebne Abitaleb hospital maternity hospital from March to September 2008 and had their tubal ligation at least one year ago were evaluated. Collection of information was done via completing the questionnaires.

Results: Among 200 persons who were studied, 78 persons (39%) had one or more complaints. Frequency distribution of patient's complaints after surgery was not related to age, parity, education and time of tubal ligation. 83.2% of the patients and their husbands were not repentant from doing tubal ligation. Menstrual abnormality was seen in 75.7% and low back pain and chronic pelvic pain was seen in 59.5% of patients. Menstrual abnormalities had a meaningful relation with age ($p < 0.001$) and parity ($p = 0.01$). Chronic pelvic pain did not have a meaningful relation with patient's age ($p = \text{NS}$) but it had a meaningful relation with parity ($p = 0.006$).

Conclusion: According to the results it seems that tubal ligation in this region is a suitable method of contraception. It is necessary to explain about probable side effects and that the contraception will be permanent. According to probable relation of age and parity with some possible side effects in the future, it is necessary to select patients for tubal ligation carefully.

Key words: Contraception, Tubal ligation, Menstrual abnormality, Pelvic pain.

P-150

The survey of abnormal glucose tolerance and insulin resistance and incidence of diabetes type 2 in polycystic ovary syndrome patients in Shiraz

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Introduction: Polycystic ovarian syndrome is one of the most common hyper androgenic disorders affecting women, its prevalence being estimated at between 5% and 10%. Our goal was the survey of abnormal glucose tolerance, insulin resistance and incidence of diabetes type 2 in polycystic ovary syndrome patients.

Materials and Methods: This investigation is a descriptive – analysis study which is done to survey abnormal glucose tolerance, insulin resistance and incidence of diabetes type 2 in polycystic ovary syndrome (PCOS). In this study 150 patients with the diagnosis of PCOS were included. These patients were chosen by target based simple sampling among the subjects, laboratory tests were performed in 125 patients. Questionnaire, fasting blood sugar test, fasting insulin and glucose tolerance test by 75gr glucose, were used for obtaining the data. The results of the blood sugar test were interpreted using the WHO 1999 criteria.

Results: The results of oral and glucose tolerance test showed 14.4 percent of the patients had impaired fasting glucose and 4 percent of the patients had diabetes type 2 ($\text{FBS} > 126 \text{mg/dl}$). Insulin resistance was seen in 9.8 percent of the patients. 7.2 percent of the patients had impaired blood sugar after two hour (140-199 mg/dl) and 0.8 percent of patients had diabetes type 2 ($200 > \text{mg/dl}$).

Conclusion: level of fasting blood sugar and insulin and ratio of fasting blood sugar to fasting insulin was good marker for diagnosis of insulin resistance. American diabetic association recommended for the care of young women with PCOs, screening for impaired glucose tolerance and diabetes type 2.

Key words: Polycystic ovarian syndrome, Glucose tolerance, Insulin resistance.

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The effect of Entonox on fetus descending in normal delivery

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Introduction: Entonox is the analgesic gas that is made of Oxygen and N₂O with equal proportion. Entonox reduces the pain of uterus contraction at the time of delivery. The aim of this study was to evaluate the effect of Entonox on pregnant women referring to Afshar Hospital in Yazd.

Materials and Methods: This is a clinical trial study. 75 pregnant women (primipar) that aged between 20-30 years old were selected. These patients had similar efasman and dilatation. Group 1 consisted of 39 cases with < -2 station, and group 2 consisted of 36 cases which had > -2 station.

Entonox was used for both groups. They were examined for fetus descending hourly, and data were collected.

Results: In both groups, the level of pain reduced. Efasman and Dilatation were advanced. Normal delivery was happened in group 1. In group 2, fetus descending was not observed and Transvers arrest was observed. For group 2, cesarean operation was recommended.

Conclusion: The majority of patients were satisfied with the effect of Entonox analgesia. Transverse arrest in group2 may be due to lack of cooperation of mothers and muscle relaxation. According to this study, it is better to use Entonox at lower station. More studies are recommended for final conclusion.

Key words: Entonox, Normal delivery, Analgesic, Fetus descending, Cesarean.

P-152

Study of day three FSH and LH level on number and quality of fertilized oocytes in infertile women candidate for ART cycle

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Introduction: Gonadotropins are main regulator of women menstrual cycles during which ovulation occur. Infertile women with high level of FSH are poor responder to ovulation during ART cycles and do not take good result. This Study is done to evaluate the effects of day three FSH and LH level on number and quality of fertilized oocytes in infertile women candidate for ART cycle. Based on this study someone be able to have better prediction of the response of patient and results of treatment.

Materials and Methods: This is an experimental meta analysis on 59 women come to infertility center for ART treatment. In the third day of menstrual cycles, FSH and LH levels were measured with radioimmunoassay technique and their effects on quality and quantity of oocytes and also pregnancy rate was evaluated. FSH and LH amounts categorized in four groups and data examined by SPSS (16) software.

Results: Average levels of FSH = (8.7 ± 9.01) , LH = (7.27 ± 7.56) and oocytes number was (10.29 ± 7.88) . FSH level had meaningful relationship with pregnancy rate, oocytes number; metaphase 2

oocytes number A quality oocytes and fertilized oocytes. LH level had no meaningful effect on the results.

Discussion: In this study as FSH level increases the number and quality of oocytes, fertilized oocytes and pregnancy rate increase. The best result can be seen in FSH = 10-15 mIU/ml. LH increase also improve the effects and best results can be seen in $8 \geq$ LH. In the other word maximum number of fertilized oocytes with grade A and grade B quality and least number of grade C quality is observed in this amounts. So it be said that day three FSH and LH level can predict the results of ART cycles.

Key words: Gonadotropin hormones (FSH and LH level), ART, Infertility.

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The relationship between maternal HCT levels, birth weight and risk of low birth weight

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Introduction: Almost 7.7 percent of all newborns weigh less than 2500 g in different countries. One of the most important reasons that lead to low birth weight, is maternal anemia during pregnancy. On the other hand, if maternal hemoglobin is too high, the prenatal outcome is not fine. In this research we studied the relationship between maternal hematocrit (Hct) and birth weight, as well as the risk of low birth weight (LBW).

Materials and Methods: This is a cohort study on all pregnant women who used to come to Arash hospital to receive prenatal care (April 2003 – March 2004) and they also delivered there. The basic data like Hct and Hemoglobin levels regarding to pregnant mothers were documented in first visit. Mothers were then divided into different groups on the base of Hct rate in 1st and 3rd trimester of pregnancy. Finally, the relation between LBW and Hct in different groups was calculated using SPSS and STATA. The results were expressed as mean \pm SEM. The level of statistical significance was set at $p < 0.05$.

Results: If pregnant women have abnormal (higher or lower than normal) Hct level in the first or third trimester, the mean birth weight will be lower and the risk of LBW higher. Maternal Hct level, maternal height, maternal weight and gestational age at delivery have relation to the risk of LBW.

Conclusion: It seems that an unfavorable level of maternal Hct is associated with a decrease in newborn's weight and LBW. So, special attention to the level of maternal Hct during pregnancy and control of it can decrease LBW incidence.

Key words: Hemoglobin, Hematocrit, Pregnancy, Low birth weight.

P-154

Abortifacient effects of *Stachys Lavandulifolia* in Balb/C

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Introduction: Several studies have shown that many women tend to use medicinal plants during pregnancy and lactation. However, the teratogenic effect of most of these plants is not established. One of these plants is *Stachys Lavandulifolia* that is used for many health problems such as anxiety. We had a couple of reports indicating this plant might have abortifacient effect on pregnant women. Therefore in this study we examined this effect of *Stachys Lavandulifolia* on Balb/C mice.

Materials and Methods: In Shahrekord University of Medical Sciences an experimental study 36 female Balb/c mice (30-40 gr, 8-12 weeks old) were randomly designated in 6 groups. One male mouse was considered for each two female mice and kept in a cage. Pregnancy was controlled with vaginal smear and vaginal plaque. Alcoholic extract of *Stachys Lavandulifolia* was prepared by maceration method. The doses of 50,100,150 and 200 mg/kg of the extractions or normal saline (sham group) were injected intraperitoneally to pregnant mice from the 7th to 12th days of pregnancies. The fifth group (control group) received nothing. The day 16th of the pregnancy the uterine tubes of mice were removed and the absorbed fetuses were counted.

Results: The number of absorbed fetuses were 5, 9, 9, 14, 0 and 0 in 50,100, 150, 200 mg/kg extract, sham and control groups, respectively.

Conclusion: The use of *Stachys Lavandulifolia* during pregnancy may cause abortion and therefore it should be considered as contraindication or use with caution.

Key words: Abortifacient, *Stachys Lavandulifolia*.

P-155

Mouse oocyte cryotop-vitrification using low concentrated solutions: effects on spindle apparatus and developmental ability

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Introduction: Ethical restriction and assurance of potential fertility following chemo/radio therapy in neoplastic pathologic condition have led scientists to focus on female gamete preservation. Over the years, changing freezing solutions, introducing new different cryocontainers and examining various cooling/warming rates, researchers have introduced various cryopreserving methods and protocols. On the other aspect, preserving frozen-gametes and embryos qualified until they need to be used is fundamental among any cryostorage methods. Obviously decreasing cryoprotectants (CPAs) concentration and therefore the toxicity, would be a step toward the higher security level of the cryopreservation technique.

Materials and Methods: Following vitrification/warming by using different CPAs concentrations, Mouse Metaphase-II oocytes were subjected to Partial Zona Dissection/Intra Cytoplasmic Sperm Injection procedure. Survival, Fertilization and Developmental Rates (SRs, FRs, DRs) were recorded. Immunohistochemical studies were done both immediately post-warming and after one hour incubation. As well as comparing to fresh oocytes, data were analyzed in comparison to the data of experimental group applying 15% CPAs (largely-used concentration).

Results: The data of oocytes exposed to 1.25 Molar (M) concentrated CPAs were in consistency with those exposed to 1.5 M and fresh oocytes in terms of SRs, FRs and DRs. Normal spindle and chromatin configuration is in consistent between two experimental groups but lower in comparison with control group. As less concentrations were applied, the more decreased SRs, FRs, DRs and having normal spindle organizations were obtained from other experimental groups.

Conclusion: Vitrification by cryotop technology using minimal volume approach increases both cooling and warming rates, so the CPAs limited reduction to 1.25 M instead of using 1.5 M for oocyte cryotop-vitrification procedure, may be a slight adjustment.

Key words: Mouse, Oocyte, Vitrification.

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The effect of morphine administration on ultrastructure of pregnant mice uterus

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Introduction: Opiate abuse providing consumption effect unfavorable consequences on different organs. In order to evaluate the effects of morphine on the uterus structure, the present study focused on the effects of morphine on ultrastructure of uterus in BALB/c mice.

Materials and Methods: Forty BALB/c mice were included in this study. Three females mice were crossed with one male and vaginal plug was considered as day 0 of pregnancy (E0). The pregnant females were divided into four groups: two experimental groups (I&II), sham and control groups. 5 mg/kg and 10 mg/kg morphine were injected via intra-peritoneal (IP), daily (during 15 days) into each experimental group, respectively. The same volume of saline was used for IP injection for sham group, and control group did not receive any injection. In the fifteenth day of gestation (E15), the pregnant females were sacrificed and their uteri were removed. The histochemical staining was done and all the samples were studied using light and transmission electron microcopies (TEM).

Results: In light microscopy, the uteri of sham and control groups were normal. In experimental groups, some apoptic sites with polymorphic inflammatory infiltration and congestion of vessels were observed. The percent of polymorphic inflammatory infiltration and picnotic sites were 60% in the first experimental group, 70% in the second and 0% in both sham and control groups. The percent of vessel congestion in the experimental groups was 70 % and 0% in sham and control groups. There was a significant difference between the experimental and control groups ($p=0.0001$). The ultrastructural study showed the nuclear membranes of endometrial epithelial cell of uteri was torn, convoluted, and a distance between nuclei and irregular chromatin was observed.

Conclusion: Morphine administration caused histology and cytology lesions that may be responsible for endometrial alteration.

Key words: Mice, Morphine, Endometrium, Uterus, TEM.

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Comparison of open and laparoscopic varicocelectomies in terms of operative time, sperm parameters, and complications

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Introduction: Varicocele is one of the most common causes of infertility. In this study, we evaluated and compared the operative time, sperm analysis results, and complications of three different methods of open and laparoscopic varicocelectomies.

Materials and Methods: From among all bilateral varicocelectomies in our center, we randomly selected 30 of each following cases: laparoscopic varicocelectomy, open subinguinal varicocelectomy under general anesthesia, and open subinguinal varicocelectomy under local anesthesia. We compared the operative time, sperm analysis results, and complications between these three groups.

Results: The mean operative times were 30.0 ± 5.5 minutes for laparoscopies, 27.0 ± 3.5 minutes for open varicocelectomies under general anesthesia, and 38.0 ± 1.8 minutes for open varicocelectomies under local anesthesia ($p=0.02$). Intra-operative complications occurred only in the laparoscopic group, and postoperative complications were seen in 23.3%, 20.0%, and 4.2% of the patients with laparoscopy, open surgery under general anesthesia, and open surgery under local anesthesia, respectively. Semen analysis did not show any significant changes after varicocelectomy except for a slight improvement of sperm morphology in patients who underwent open varicocelectomy under local anesthesia.

Conclusion: Subinguinal varicocelectomy under local anesthesia is better than laparoscopic method in terms of recurrence, hydrocele formation, and operative time. Subinguinal method under general anesthesia has intermediate efficacy regarding less complications than laparoscopic method and shorter operative time than the two other methods.

Key words: Varicocele, Laparoscopy, Infertility.

P-158

Folk remedy for infertility among the Turkmen people

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Introduction: Treating infertility doesn't merely deal with advanced medical procedures. There are a variety of ways people use to change conception. Herbal and non herbal home remedies are some of them. The aim of this study was to explore the folk medicine practiced among the Turkmen people who live in Gomishan in Northern Iran, Golestan Province with regards to male and female infertility.

Materials and Methods: In this ethnographical study data was gathered using observation and open interviews with traditional healers and older people of the Turkmen villages (Gomishan, Golestan Province, Iran).

Results: The observations and interviews revealed interesting data. One of them is: Packing the abdomen. Three days after a woman's period, she should take rest and lie in bed and elevate her legs. Massaging and rubbing of her abdomen from the bottom toward chest should be performed. The abdomen exactly below of the umbilicus should be tied with a sheet for 3 or 4 days. During this time she must have frequent intercourse as the chance of pregnancy depends on it. Complete bed rest is strongly emphasized as well. People from Gomishan believe one of the reasons for infertility is CHELLEH. To cure that, they get seven colorful threads of the same length from the infertile woman then tie the woman's legs and put the treads on the big toes and then cut them into three pieces. The pieces should be put on the road on Fridays for three times. Also the infertile woman should take a shower with water that had placenta soaked in it for a while, or she should put the placenta on her head and take a shower.

Conclusion: The Turkmen people have both useful and harmful herbal and non-herbal remedies that should be considered by the investigators. Some of them could be useful in making new and natural industrial drugs.

Key words: Folk Remedy, Infertility Turkmen, Iran.

P-159

Comparison of sexual problems in fertile and infertile couples

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Introduction: Infertility is a phenomenon that effect on sexual and familial status and dimensions

of life in couples. This survey was done to Comparison of sexual problems in fertile and infertile couples who came to infertility centers of Tehran University of medical sciences.

Materials and Methods: This study was case-control and sample size included 120 infertile and fertile couples in two groups (n=240). Sample size was selected with random method. Tool was WHOQOL questionnaire that it valid and reliable in pilot study. Data collection was done by educated personels. The data was analyzed by SPSS soft ware. The statistical methods used in this study were chi-square, independent T-Test and Pearson correlation test.

Results: The results of this study indicated that infertile women had lower psychosocial status. These women had higher sexual problems. This research showed that was positive relation between infertility and sexual problems variable. Psychological dimension in women infertile was poor in 36.7 percent and men were poor in 13.3 percent.

Conclusion: The score of sexual dimension in infertile couple was low. Between sexual problem and infertility was straight correlation. This survey can be applied attention to in health planning for women especially in sexual problems.

Key words: Infertility, Women life, Infertile couple, Fertility.

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The association of early mother-newborn skin to skin contact with reduction of postpartum hemorrhage

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Introduction: Mother-newborn separation post birth is common in the world. Early skin-to-skin contact (SSC) begins ideally at birth and involves placing the naked baby, covered across the back with a warm blanket, prone on the mother's bare chest. According to mammalian this time may represent a physiologically 'sensitive period' for producing of Oxytocin in mother serum like breastfeeding which leads to uterus contraction. Postpartum hemorrhage is a significant contributor to worldwide maternal morbidity and mortality. Guidelines for the management of postpartum hemorrhage (PPH) involve a stepwise escalation of pharmacological and eventual surgical approaches. However little has been done to evaluate the effects of early SSC of mother and newborn in

reduction of postpartum hemorrhage rate. Thus, in this study we test the relation between postpartum hemorrhage and SSC.

Materials and Methods: Current investigation is an analytic cross-sectional survey which has performed as a case-control study with sample size of 272 subjects (with normal vaginal delivery) in two groups of 136 women. First group had immediate postpartum skin contact with their newborn for 15 minutes and the other group had no contact. Mann-Whitney and Chi-Square tests were used for statistical analysis and significant level was set at $p < 0.05$.

Results: Mean age of mothers was 26.98 ± 4.6 years. Mean initial hemoglobin was 12.4 ± 0.9 mg/dl. Mean postpartum hemoglobin was also 11.22 ± 1.02 mg/dl which in case group was 11.5 and in control group was 10.9 mg/dl ($p = 0.0001$). Totally, the women had 1.18 ± 0.5 mg/dl in hemoglobin reduction which was 0.76 mg/dl in case and 1.59 mg/dl in control group ($p = 0.0001$).

Conclusion: We conclude that there was a statistically significant association between early mother-newborn contact and reduction of the postpartum hemorrhage.

Key words: Early skin to skin contact (SSC), Newborn, Postpartum hemorrhage (PPH).

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Health related quality of life in endometriosis patients using Endometriosis Health Profile 5(EHP-5) Questionnaire

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Introduction: to determine the quality of life (QoL) in patients with endometriosis using EHP-5 questionnaire.

Material and Methods: one hundred and one patients with new laparoscopically confirmed endometriosis completed the EHP-5 questionnaire. EHP-5 is valid and reliable (Cronbach's α score of 0.7) Persian version of the original EHP-5 questionnaire. The instrument contained two parts: core questionnaire with 5 items and five scales: pain, control and powerlessness, emotional well-being, social support, and self-image. For each scale a score between 0 (indicating the best possible health status) to 100 (indicating the worst possible health status as measured on the questionnaire) was calculated. The modular part consisted of 6 items that may not be applicable to every patient, including the domains: work, intercourse, infertility, treatment, relationship with children, and the medical profession.

Results: the mean age of the study sample was 31.49 (SD: 5.9) and 89.1 % of participants were married. The median score for pain, control and powerlessness, emotional wellbeing, social support, and self image was 25, 50, 50, 25, and 25 in order of reference. A positive history of a term pregnancy, abortion, dysmenorrhea, or premenstrual syndrome was associated with at least one dimension of EHP-5.

Conclusion: endometriosis impairs Health related QoL especially in the domains of pain, psychological and social functioning, so assessing QoL should be a main part of primary and as well after treatment investigations to reveal the effectiveness of different treatments.

Key words: Endometriosis, HRQoL, EHP-5, Questionnaire.

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