Our experience in congenital pouch colon

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ABSTRACT

Congenital pouch colon is considered to be a malformation seen only in north India. We carried out a prospective study of congenital pouch colon from 1991 to 2005 to determine what interventions are most suited for the short and long term management of this complex malformation. Anatomical details, procedures, and continence outcomes were recorded. Patients were managed in a private and public hospital by a single surgeon. 17 patients could be enrolled in the study. We could reconstruct 16/17 patients. With aggressive bowel management, 9/14 patients could achieve continence.

KEY WORDS: Anorectal malformations, ARMF, pouch colon

INTRODUCTION

Congenital pouch colon,[1] a variant of anorectal malformation is not common in Maharashtra and southern India. We were able to diagnose and treat 17 babies with congenital pouch colon by various surgical procedures [Table 1]. Continence was poor in most patients. However, many were able to achieve social continence by bowel management program.

MATERIALS AND METHODS

This is a prospective analysis of 17 patients of congenital pouch colon who were treated by the author from 1991 to 2005 in different hospitals.

Six were male and 11 were female.

All patients were referred for anorectal malformation. After confirming the diagnosis, by careful inspection of perineum, X-ray abdomen was done in anterior, posterior and lateral positions. Presence of a large gas filled loop of bowel occupying more than half of the abdomen was considered diagnostic of congenital pouch colon and the child underwent loop ileostomy [Figures 1 and 2]. Two girls with common cloaca and single opening in perineum did not show the large bowel loop. They were suspected to have congenital pouch colon and the diagnosis was made at laparotomy. They underwent ileostomy. One girl with double vagina, double uterus; anterior ectopic anus and bladder hypoplasia underwent anterior sagittal anorectoplasty (ASARP) as the initial procedure. When she was being explored for hysterectomy and bladder augmentation, she was found to have a pouch colon. She underwent bilateral hysterectomy and ileal conduit urinary diversion.

All babies with ileostomy were monitored for weight gain.
and failure to thrive was vigorously managed with nutritional supplements, which included soyabean milk, eggs, ground almonds, cocoanut oil, etc. Iron and vitamins were supplemented in all patients.

Associated anomalies:[2]
- Double vagina and uterus 2 [Figure 1]
- Duplication of colon 1 [Figure 3]
- Hydroureter 2
- Bladder hypoplasia 1 [Figure 1]
- Vesicoureteric reflux 2
- Septate vagina 3

Definitive reconstruction was done when the child weighed 7 kg or more by abdomino-perineal approach. Abdomen was opened by a long midline or left paramedian incision. Bowel was detached from the bladder and it was closed. Bowel was trimmed and lengthened (coloplasty).[3] Terminal portion of bowel was preserved in all patients. Puborectalis sling was identified by Stephen’s method. Nixon skin flaps were raised and bowel was pulled through. Girls with pouch colon and common cloaca underwent only pullthrough as the primary procedure. Anal dilatations commenced three weeks after the pullthrough. All patients underwent anal dilatation at home for three months. Ileostomy was closed three months after the pullthrough.

All patients were put on a program of vigorous bowel management after ileostomy closure. This included daily dilatation, daily washouts with normal saline, glycerine/soap water enema oral laxatives, bulk forming agents and so on, for 1-4 years.

Malabsorption was treated with combination of immodium, iodochlorohydroxyquinoline, codeine and anticholinergics. Therapy was modified depending upon patient’s response and side effects.

Failure to achieve continence beyond 4 years of age was considered an indication for Malone antegrade continence enema (MACE). This was offered to patients and parents. Kelly’s score was used for assessment of continence.

Observations
1. Children tolerated ileostomy well. There were no mortalities related to ileostomy. Local excoriations have been managed with a special protective powder we have developed. This powder has prevented excoriations and healed active wounds around ileostomy.
2. Children needed extra-nutritional support which was provided with soyabean milk, cocoanut oil, ground almonds and eggs.
3. Fourteen patients could undergo definitive reconstruction. Two are awaiting reconstruction.
4. One girl with cloaca (pouch colon) died soon after ileostomy. Her distended loop had perforated leading...
to peritonitis and sepsis.
5. Continence was judged when the child was 4 years old.
6. Four children underwent MACE and are continent. Three are continent with retrograde saline enema. Two are continent without any assistance. Remaining five are awaiting evaluation. They need to wear diapers.
7. One child developed recurrent bladder stones and needed cystolithotomy twice.
8. The young woman with anterior ectopic anus and pouch colon also had double uterus, double vagina, hypoplastic bladder and ectopic ureters [Figure 4]. She expressed a strong desire to undergo hysterectomy to relieve from the monthly hassles of menstruation. She also wanted to undergo urinary diversion to avoid continuous dribbling of urine and urinary smell, which had plagued her since childhood. For these reasons, the procedures were carried out.

DISCUSSION

Creation of anus in the perineum is not enough.

Malabsorption is common. Immodiums, codeine, iodochlorohydroxyquinoline, anticholinergics help in certain patients. The response of each patient is variable and drug therapy has to be tailored to suit the patient. Drug therapy has to be continued for many months. Continence can be achieved with bowel management and the children can lead a normal productive life.

Congenital pouch colon is not said to be common in south of the vindhyas; but we could treat 17 patients. Variations in anatomy, presentation, initial treatment by different surgeon make it difficult to propose a standard management protocol and every patient needs a procedure appropriate to his/her anatomy. Pharmacotherapy and rigorous bowel management lead to satisfactory social continence.

It is doubtful whether all or many of these children will be able to marry and have a normal social and family life as illustrated by one of our patients. Intensive counseling and motivation is required when these patients reach puberty and adolescence.

REFERENCES


Figure 4: Congenital pouch colon with double vagina and uterus, bladder hypoplasia and anterior ectopic anus

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