

## Intrauterine Testicular Torsion with Undescended Testis and Ureteropelvic Junction Obstruction

Maryam Rahmani<sup>1</sup>, MD; Elahe Amini<sup>2</sup>, MD;  
Mansour Molaeian<sup>3</sup>, MD;  
Hosein Chegini<sup>\*2</sup>, MD

1. Department of Radiology, Tehran University of Medical Sciences, IR Iran
2. Department of Pediatrics, Tehran University of Medical Sciences, IR Iran
3. Department of Pediatric Surgery, Tehran University of Medical Sciences, IR Iran

Received: 24/08/08; Revised: 15/10/08;  
Accepted: 12/11/08

Neonatal testicular torsion usually occurs in uterus<sup>[1]</sup>. Intrauterine testicular torsion (IUTT) is an infrequent condition and bilateral intrauterine torsion is very rare<sup>[2,3]</sup>. Prenatal torsion occurs around 34-36<sup>th</sup> weeks of gestation and is an extravaginal event<sup>[1,4]</sup>. Hydrocele may be the only intrauterine sonographic feature so prenatal diagnosis may be missed<sup>[1]</sup>. It presents at birth as a hard, swollen and nontender testis<sup>[5,6]</sup>. Color and power Doppler sonography are the diagnostic method of choice<sup>[2,4,6,7]</sup>. In the literature none of reported cases stated any accompanying anomalies.

A full term (39 weeks) 3940 gr male newborn was delivered by caesarean section due to breech presentation of a 21 year-old gravid one mother. The Apgar score was 9 and 10 in first and 5<sup>th</sup> minute of birth. Mother's blood group was B Rh negative and neonate's was A Rh negative. No positive family or past

medical history was reported. Obstetric sonography in 35<sup>th</sup> week of gestation showed left sided severe fetal hydronephrosis and left sided Hydrocele. Pediatric physical examination revealed nontender, dark and swollen scrotum specially in left side without transillumination. Careful abdomenopelvic and scrotal sonography (Siemens G60, 5 and 10 MHz) showed left side hydrocele containing some debris and left testicle was heterogeneously echogen and enlarged (volume 4.1 ml). Subtunical fluid in left testicle was seen too (Fig 1). In power and color Doppler study no flow signal was detected. Right testicle was found within inguinal canal (undescended). In DTPA scan no tracer secretion was seen in left kidney. Echocardiography finding was normal.

Left sided ureteropelvic junction obstruction (UPJO), right sided undescended testis (UDT) and left side IUTT were suspected



**Fig 1:** Subtunical fluid in left testicle in our patient with intrauterine testicular torsion

\* **Corresponding author; Address:** Bahrami Children's Hospital, ShahidKiani St, Damavand Ave, Tehran, IR Iran  
**E-mail:** cheginhosein5427@yahoo.com

and newborn was referred to pediatric surgeon. Operatively extravaginal torsion of spermatic cord and left testicle necrosis was found. Left side orchidectomy and right side orchiopexy was performed.

IUTT is a rare condition and some authors described the time of torsion in the 34-36<sup>th</sup> weeks of gestation<sup>[2,8]</sup>. Etiology of intrauterine torsion is unknown but higher birth weight, labor trauma, breech presentation and overactive cremasteric reflex may be risk factors<sup>[2]</sup>. No anomaly was described to be accompanied by this condition<sup>[2]</sup>.

In our case, IUTT in a large fetus with breech presentation and urogenital anomalies (UPJO and undescended testis) was found. Regarding literature there are some reports on IUTT but none of them indicate any accompanying congenital anomaly, thus this is the first case of IUTT with such urogenital anomalies.

After birth, nontender swollen scrotum in physical examination and enlarged heterogeneous echogenic testis with subtonical fluid in B-mode sonography associated with absent flow in Doppler studies help to differentiate intrauterine torsion from other pathologies. Neonatal (acute) testicular torsion, orchitis, epididymitis, ectopic spleen or adrenal, hematocele and tumoral lesions are other differential diagnoses<sup>[1,2]</sup>.

Prenatal diagnosis of intrauterine testicular torsion is very difficult because hydrocele may be the only feature of torsion in uterus that could be present in other pathologies and normal fetuses too. In presence of other congenital urogenital anomalies, severe hydrocele and enlarged heterogeneous testicle (if present) lead to considering IUTT.

**Key words:** Intrauterine testicular torsion; Ureteropelvic junction obstruction; Color Doppler sonography

## References

1. Youssef BA, Sammak BM, Al-Shahed M. Case Report. Pre-natally diagnosed testicular torsion ultrasonographic features. *Clin Radiol*. 2000; 55(2):150-60.
2. Arena F, Nicotina PA, Romeo C, et al. Prenatal testicular torsion: Ultrasonographic features, management and histopathological findings. *Int J Urol*. 2006; 13(2):135-41.
3. Barbari S, Formoe E. Bilateral torsion of testes in the newborn. Case report. *Acta Chir Scand*. 1984;150(7):581-3.
4. Gorbonos A, Cheng EY. Perinatal testicular torsion in siblings. *J Ped Urol*. 2007;3(6): 514-5.
5. Van der Sluijs JW, den Hollander JC, Lequin MH, et al. Prenatal testicular torsion diagnosis and natural course. An ultrasonographic study. *Eur Radiol*. 2004; 14(2):250-5.
6. Wong CY, Yong SC, Boo NY, et al. A case of neonatal testicular torsion. *Br J Hosp Med*. 2005;66(6):368-9.
7. Traubici J, Daneman A, Navarro O, et al. Testicular torsion in neonates and infants: sonographic feature in patients. *AJR Am J Roentgenol*. 2003;180(4):1143-5.
8. Tripp MB, Homsy YL. Prenatal diagnosis of neonatal torsion: a case report. *J Urol*. 1995;153(6):1990-1.

