

TORSION TESTIS: SURGICAL MANAGEMENT

MD. NASIR UDDIN¹, KAZI RAFIQU ABEDIN², KAZI ZIKRUR RAZZAQUE², MD. SERAJUL HOQUE¹, MD. MASUM HASAN¹, MD. MONOWARUL HAQUE SHAMIM¹

¹Department of Urology, Comilla Medical College Hospital, Comilla, ²Department of Urology, National Institute of Kidney Diseases and Urology, Dhaka

Abstract

Objective: Acute testicular torsion is a urological emergency that require quick accurate diagnosis and timely surgical intervention to salvage the testis. Nature of surgical management depending on viable or non viable testis during surgical exploration.

Materials and methods: This retrospective study was conducted at some private hospital in Dhaka city and Comilla from June 2006 to February 2011. The study enrolled 36 patients with age range 7 to 23 years, mean age was 14 years. Twenty one (58.33%) patients reached hospitals within 4 to 6 hours from onset of pain, 7(19.44%) patients within 12 hours, 3(8.33%) patients within 24 hours, 2(5.55%) patients within 2 days and 3(8.33%) patients after 5 days of onset pain. All patients underwent surgical exploration.

Results: Twenty four (66.66%) patients showed viable testis on exploration and orchidopexy were done on ipsilateral testis with prophylactic orchidopexy on contralateral site. Another 12 (33.33%) patients had nonviable testis, required orchidectomy on involved testis and prophylactic orchidopexy on opposite testis.

Conclusion: Spermatic cord torsion represents a commonly encountered urological emergency where accurate diagnosis and timely intervention are essential for functional and nonatrophied testicular salvage.

Key word: Torsion testis; Timely surgical exploration; Orchidopexy, Orchidectomy.

Bangladesh J. Urol. 2012; 15(1): 3-5

Introduction

Testicular torsion is a urological emergency in order to salvage the testis, occurred due to abnormal twisting of the testis and spermatic cord. Patients usually present with acute severe scrotal pain sometimes associated with nausea and vomiting. These catastrophe must be treated promptly to save the involved testis as it causes a decreased or even complete loss of blood flow to the affected testis¹. It commonly occurs at puberty between 12-18 years of age, although there is also a peak during the neonatal period². The onset of symptoms is usually spontaneous and sometimes very difficult to differentiate from epididymo-orchitis. Its incidence is approximately 1 in

4000 per annum³. The risk of bilateral synchronous or metachronous testicular torsion is 2%². It is also common in undescended testis. Testicular torsion accounts for about 17% of acute scrotal presentations⁴ and is the eventual diagnosis in almost 40% of scrotal explorations for suspected torsion of testis⁵.

Materials and methods

This retrospective study was conducted at some private hospital in Dhaka city and Comilla from June 2006 to February 2011. The study enrolled 36 patients with age range 7 to 23 years, mean age was 14 years. All male patients were presented with severe acute unilateral scrotal pain; some were associated with nausea and vomiting. Twenty one (58.33%) patients reached hospitals within 4 to 6 hours from onset of pain,

Correspondences: Dr. Md. Nasir Uddin, Department of Urology, Comilla Medical College Hospital, Comilla, E-mail: kazauro@yahoo.com

7(19.44%) patients within 12 hours, 3(8.33%) patients within 24 hours, 2(5.55%) patients within 2 days and 3(8.33%) patients after 5 days of onset pain. Clinical examination revealed affected side is swollen, inflamed, tender, absent cremasteric reflex, horizontal lie and pain aggravated with elevation of the testis. In most of the cases diagnosis was made considering symptoms, physical findings and age of the patients, then patients underwent surgical exploration. Some investigations were suggested in equivocal cases and when facilities were available in time like urine RME and Culture, relevant biochemical tests, and Doppler Ultrasonography. In our study we advised Doppler USG in 13 patients within them 12 patients showed absent blood flow to the involved testis. We never used Testicular scan or testicular MRI. All 36 patients underwent exploration by longitudinal incision. When testis was viable, detorsion and orchidopexy done with 3/0 Prolene at 3 site. Orchidectomy was done when it was nonviable. At same time prophylactic orchidopexy done on opposite site.

Results

All 36 patients underwent surgical exploration under spinal anesthesia. Twenty one patients those presented within 6 hours of onset of pain showed viable testis, detorsion and orchidopexy done with prophylactic orchidopexy on opposite testis. 3 patients among 7 that presented within 6 to 12 hours, showed viable testis, orchidopexy done, rest 4 patients showed nonviable testis and orchidectomy done with orchidopexy on other side. Another 8 patients presented after 12 hours, went exploration all were non viable and orchidectomy done with opposite site prophylactic orchidopexy.

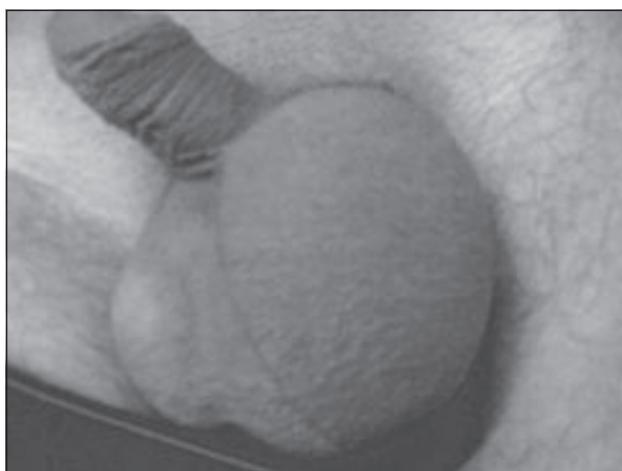


Fig-1: Testicular swelling



Fig-2: Non viable testis



Fig-3: Viable testis

Table-I
Age of the patients

Age	Frequency
7-11	04
12-16	16
17-21	14
22-26	01

Table-II

Findings of color Doppler study in 13 patients

Treatment given	No. of Patient
No blood flow	12 patients
Preserved blood flow	1 patient

Table-III

Results

Treatment given	No. of Patient	%
Orchidopexy	24	(66.66%)
Orchidectomy	12	(33.33%)

Discussion

Spermatic cord torsion represents an acute urologic emergency. Testicular survival without atrophy is a function of the length of organ ischemia. Testicular viability has been shown experimentally⁶ and clinically^{7,8} to correlate directly with duration of ischemia. Most testes may be salvaged that if detorsion is effected within 6 hours of onset 8, conversely progressively more testicles are lost as the period of ischemia lengthens. Testicular salvage is unusual after 10 to 12 hours of torsion and approaches zero at 24 hours⁹. There is however no absolute time limit beyond which complete testicular infarction may be assumed, since the degree of vascular occlusion may be variable. Torsion of the spermatic cord usually results from initial lateral to medial rotation of the testicle. However, considerable variation has been reported.

Most patients with confirmed or suspected spermatic cord torsion undergo emergency scrotal exploration with detorsion under direct vision followed by bilateral orchidopexy when vascularity is confirmed, or orchidectomy and contralateral orchidopexy if testicular infarction is present. The key to testicular preservation is however not an emergency operation, but detorsion of the spermatic cord and restoration of organ perfusion. In our study among 36 patients 24 showed viable testes after detorsion then orchidopexy done on involved site with prophylactic orchidopexy on contralateral site. Within them 21 patients reached within 6 hours and another 3 reached within 12 hours. Result of our study was close to the results conducted by Cattolica EV et al 7 and makela E et al⁸. Twelve patients required orchidectomy that were non viable with opposite orchidopexy. This result was almost similar with the results of study conducted by Kiesling V et al 9. Testicle

salvageable rate is more when the exploration with detorsion and orchidopexy done early especially within 6 hours. In some cases it may be viable when exploration and detorsion done within 12 hours although it depend on degree of torsion and perfusion But 24 hours after no patients showed viable testes and required orchidectomy. So in case of torsion testis rapid surgical detorsion and orchidopexy should be done as early as possible in time to salvage the involved testis.

Conclusion

Spermatic cord torsion represents a commonly encountered urological emergency where accurate diagnosis and timely intervention are required for functional and nonatrophied testicular salvage.

Conflict of Interest : None Declared

References

1. Pentylala S, Lee J, Yalamanchili P, Vitkun S, Khan SA. Testicular torsion: a review. J Low Genit Tract Dis 2001; 5 :38-47.
2. Ringdahi E, Teague L. Testicular tortion. Am Fam Physician 2006;74:1739-43.
3. Twist and Shout: A clinical and experimental review of testicular torsion: Riyad T, Ellati, Parviz K. et; Korean Journal of Urology 2009;50:1159-1167.
4. Van Glabeke E, Khairouni A, Larroquet M, Audry G, Gruner M. Acute scrotal pain in children: results of 543 surgical explorations. Pediatr Surg Int 1999;15: 353-7
5. Watkin NA, Reiger NA, Moisey CU. Is the conservative management of the acute scrotum justified on clinical grounds? Br J Urol 1996;78: 623-7.
6. Smith G. Cellular changes from graded testicular ischaemia. The Journal of Urology. 1955;72:355–362.
7. Cattolica EV, Karol J, Rankin K, Klein R. High testicular salvage rate in torsion of the spermatic cord. The Journal of Urology. 1982;128(1):66–68.
8. Makela E, Lahdes-Vasama T, Rajakorpi H, Wikstrom S. A 19-year review of paediatric patients with acute scrotum. Scandinavian Journal of Surgery. 2007;96(1):62–66.
9. Kiesling V, Schroeder D, Pauljev P, Hull J. Spermatic cord block and manual reduction: primary treatment for spermatic cord torsion. The Journal of Urology. 1984; 132(5): 921–923.

Abbreviations

MRI: Magnetic Resonance Imaging
 USG : Ultrasonography