

A Case of Torsion Testis Salvage by Detorsion

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ABSTRACT

Early diagnosis of testicular torsion is absolutely mandatory for salvage of a viable testis. we present a classical clinical presentation of a boy, in second decade with sudden onset of testicular pain accompanied by tenderness and swelling. Managed by timely manual detorsion and followed by elective orchiopexy.

Keywords: Testicular torsion, salvage by detorsion

INTRODUCTION

Acute scrotum is defined as an sudden painful swelling of the scrotum or its contents accompanied by local signs and symptoms which usually are not associated with trauma. The most common causes of acute scrotum are testicular torsion, appendix testis torsion, epididymitis, orchitis and pyocele. Torsion of testis is undoubtedly the most serious condition affecting the scrotum that needs urgent diagnosis and treatment to save the affected testis and avoid testicular loss, fertility problems and medico-legal issues^[1]. Testicular damage commences after 6hrs of initiation of symptoms. Beyond twenty-four hours of symptoms, testicular loss will definitely happen and this is the main reason why the surgeons should immediately explore the acute scrotum^[5].

CASE REPORT

A 13-year-old adolescent male patient presented to our outpatient department, with complaints of sudden onset of severe left testicular pain, associated with nausea of 3-4 hours duration and no relief after getting treatment by private practitioner. No history of recent trauma or UTI. Physical examination shows patient in agony, pallor,

bradycardia. The left testis was tender, high-riding and was found in a transverse longitudinal-axis lie, with epididymis present anteriorly without inflammatory signs. Testicular pain was exacerbated by scrotal elevation (Prehn's sign+ve) and the cremasteric reflex was absent. There was no scrotal oedema, no signs of inflammation, no urethral discharge, no inguinal lymphadenopathy, temperature, and urine analysis was normal. Given the typical presentation and clinical findings testicular ultrasonography was not undertaken. Provisional diagnosis of left sided torsion testis was made. Manual detorsion of left testis done by rotating the testicle 180 degrees in an clock wise direction resulted in return of normal scrotal anatomy i.e. epididymis became posteriorly with long axis orientation of the testis vertically. Patient was relieved of pain and became comfortable. USG of scrotum showed normal blood flow and mild fluid collection in tunica vaginalis.

OPERATIVE FINDINGS

On left side, there was along tunica vaginalis, which was inserted high on the cord. Left testis and epididymis appeared healthy and viable. On right side though insertion



Figure 1: Patient at admission with torsion left testis



Figure 2 : High insersion of tunica vaginalis on left side



Figure 3 : High insersion of tunica vaginalis on left side

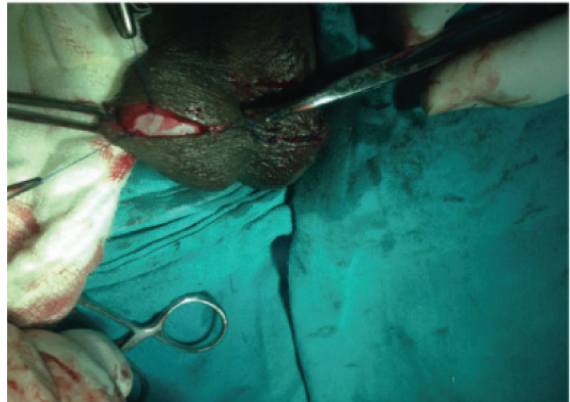


Figure 4 : Fixing of testis at three sides with 3-0 prolene



Figure 5: Patient on 5th post operative day



Figure 6 : Patient with smile at time of discharge

was not so high as left side, orchidopexy was done on both sides and both testicles were fixed with 3 - 0 prolene at right, left & lower pole. Post-operative period was uneventful.

DISCUSSION

Testicular torsion is an emergency and viability depends on the degree of torsion and duration of ischemia^[1]. Testicular salvage possible, if detorsion done within 6 hours in most of the cases^[2, 3]. Torsion of testis occurs by rotation from lateral to medial side of testis in most of the cases. In addition to rotation, in horizontal plane^[4, 5], an element of caudal to cranial rotation occurs, due to cremasteric muscle spasm that locks the testicle^[6]. Most patients with confirmed or suspected torsion undergo emergency scrotal exploration with detorsion under direct vision followed by bilateral orchidopexy, when vascularity is confirmed. Orchidectomy is done^[7] if testicular infarction is present and simultaneously, contralateral orchidopexy should be done. The key to testicular preservation is however not an emergency operation per se, but detorsion of the spermatic cord and restoration of organ perfusion.

Manipulative reduction^[8] of torsion was first described by Nash in 1893. Later Van der Poel, a 25-year-old physician suffering recurrent testicular torsion who would himself do reduction manually (self-reduction)^[9]. Manual detorsion requires reversal of the initial twisting process via rotation of the torsed testicle through 2 planes. Given the preponderance of medial rotation initial attempts at reduction should involve rotation of the testicle in a caudal to cranial direction to release the locking mechanism, in addition to simultaneous medial to lateral rotation to effect detorsion of the spermatic cord. The number of rotations required to successfully achieve reduction is likewise variable with up to 1080 horizontal degrees (three full turns) reportedly necessary in some cases. Successful reduction is reliably confirmed by lengthening of the spermatic cord, resolution of epididymal and spermatic cord edema, a return to the anatomical position of the testicle, and near complete relief of testicular pain^[11].

Successful preoperative manual detorsion has been reported in a number of case series. Cornel and Karthaus, similarly Kiesling et al. and Cattolica et al report successful reduction with acute unilateral torsion^[10]. Success rate depends inversely on duration of torsion. Intravaginal torsion, caused by a congenital malformation of the processus vaginalis, accounts for 90 percent of cases. In this malformation, the tunica vaginalis covers not only the testicle and the epididymis, but also the spermatic cord up to external ring. This creates a bell-clapper deformity that allows the testis to rotate freely within the

tunica vaginalis. Torsion usually occurs in the absence of any precipitating event. Other factors predisposing patients to testicular torsion include trauma, increase in testicular volume (often associated with puberty), testicular tumor, testicles with horizontal lie, a history of cryptorchidism and a spermatic cord with a long intra scrotal portion. Torsion initially obstructs venous return. Subsequent equalization of venous and arterial pressures compromise arterial flow, resulting in testicular ischemia^[11].

Differential Diagnosis

The differential diagnosis of the acutely painful scrotum includes testicular torsion, trauma, epididymitis/orchitis, incarcerated hernia, varicocele, idiopathic scrotal edema, and torsion of the appendix testis.

Diagnostic Studies

Imaging should be done only in cases, in which suspicion for torsion is low. Time should not be wasted in establishing for investigation like doppler^[15-16]. However doppler ultrasonography can differentiate between ischemia and inflammation. In patients with inflammation, such as that associated with orchitis, intratesticular blood flow is increased. Ultrasonography also can differentiate testicular disease (eg., torsion, tumor) from extratesticular disease (eg., hydrocele, abscess, hematoma).

Scintigraphy using technetium 99 m pertechnetate can evaluate the painful testicle and has nearly 100 percent sensitivity for testicular torsion^[12, 13, 14]. Although scintigraphy may be more sensitive for testicular torsion, ultrasonography is faster and more readily available.

CONCLUSION

Testicular torsion represents a commonly encountered surgical emergency, wherein accurate diagnosis and timely intervention are essential for testicular salvage. In majority of cases ischaemia depends upon duration and degree of torsion. While the ideal treatment is immediate manual detorsion or surgical exploration. Clinicians should be cognizant of manual detorting maneuvers and be prepared to institute these, when surgical options are delayed or unavailable. Exploration of the scrotum is very much indicated and no regrets for negative findings.

CONFLICT OF INTEREST

The authors declared no conflict of interest.

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