Testicular Torsion with Delayed Presentation: Should It Be Explored as an Emergency?

Mohamed Mohamed Elawdy[1]*, Bassam Awad[2], Mohamed Farouk[3] and Wael Toson[2]

[1]Department of Urology, Sohar Hospital, Sohar, Oman

[2]Department of Urology, Saqr Hospital, Ministry of Health, Ras Al Khaimah, United Arab Emirates

3Department of Radiology,Saqr Hospital, Ministry of Health, Ras Al Khaimah, United Arab Emirates

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*Corresponding author: mmelawdy@gmail.com

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Abstract

Testicular torsion (TT) that ends with orchiectomy is a common case in medicolegal investigations, especially those that present after a delay. The literature lacks the answers as to whether to explore those patients immediately or electively. We present a case of TT in a solitary-functioning testicle that presented more than 72 hours after pain began. The patient was explored immediately, and the testicle completely recovered. The patient was seen at 1 and 6 months respectively, and at those times the testicle showed normal size, consistency, and had normal blood flow measured by Doppler US. Delayed presentation of testicular torsion is not a rationale to delay scrotal exploration. This is the case because while intermittent torsion may convert to a complete torsion, the chance of saving the testicle still exists.

Keywords: Testicular Torsion; Torsion; Delayed Presentation.

Introduction

The clinical guidelines recommend prompt exploration for a suspected testicular torsion (TT) if the diagnosis is suspected on clinical examination, even without further imaging.[1]

Testicular torsion with a delayed presentation for more than 24 hours is challenging; the scrotum could be edematour which mimics the picture of epididymo-orchitis.[2] Alternatively, the patient could have intermittent TT that has contributed to a delay in presentation. In either case, reluctance by treating physicians to refer these patients is a common scenario in clinical practice, which raises another medicolegal aspect if it ends with orchiectomy

Although chronic testicular pain due to TT was reported in the literature in different series,[3] a few cases were reported with acute episodes who recovered after delayed presentation.[4] Additionally, the literature lacks the answer as to whether to explore those patients immediately or electively. We present a case of TT in a solitary-functioning testicle which presented more than 72 hours after pain began. It was explored immediately and the testicle recovered completely.

Case Report

A 14-year-old boy presented in the ER with right testicular pain. History revealed that the pain started more than 72 hours previously. The boy did not know what was wrong and was too shy to discuss this issue with his parents. The parents brought the boy to the ER when they observed that he was in severe pain. Past medical history was not contributory.

On examination; no abnormalities were detected in general or on abdominal examination. The left testicle was small, atrophic, and was felt at the neck of the scrotum. The patient and his family denied previous episodes on the left side, and had no surgical history on this atrophic testicle. But the mother reported that the patient has had small left testicle since childhood, that may have referred to left an undescended testicle. The skin in the right side was red and the testicle was swollen, oedematous, tender, and in a higher position. Laboratory investigations were normal apart from mild leukocytosis. Doppler US showed no blood flow in the right testicle with heterogeneous parenchyma and reactionary hydrocele [Figure 1].

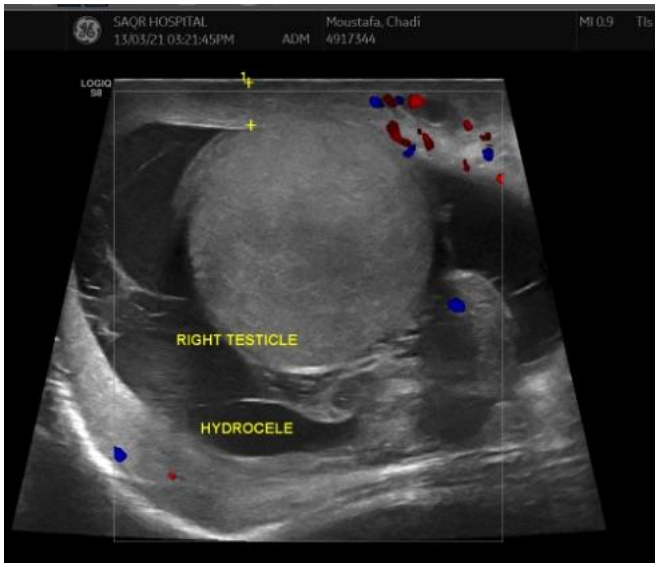

Figure 1: Doppler US shows the right testicle and epididymis are enlarged displays heterogeneous echo pattern with no definite parenchymal vascularity noted on Doppler interrogation, associated with thickened scrotal skin and subcutaneous tissue and moderate amount of loculated hydrocele. Findings are highly suggestive of testicular torsion.

The patient was subjected to immediate scrotal exploration. The spermatic cord was twisted and the right testicle was found to be deep blue in color [Figure 2a]. Detorsion was done and hot fomentation (mixed boiled water and saline at room temperature, nearly 60-65º) was applied for approximatly 25-30 minutes. Afterwards the color became lighter [Figure 2b]. Moreover, two snip incisions of the tunica albuginea were done that yielded bright red blood, emphasizing partial restoration of the vascularity. Then, orchiopexy was done by fixing the testicle with 2 sutures at 3 and 6 o'clock using absorbable sutures.

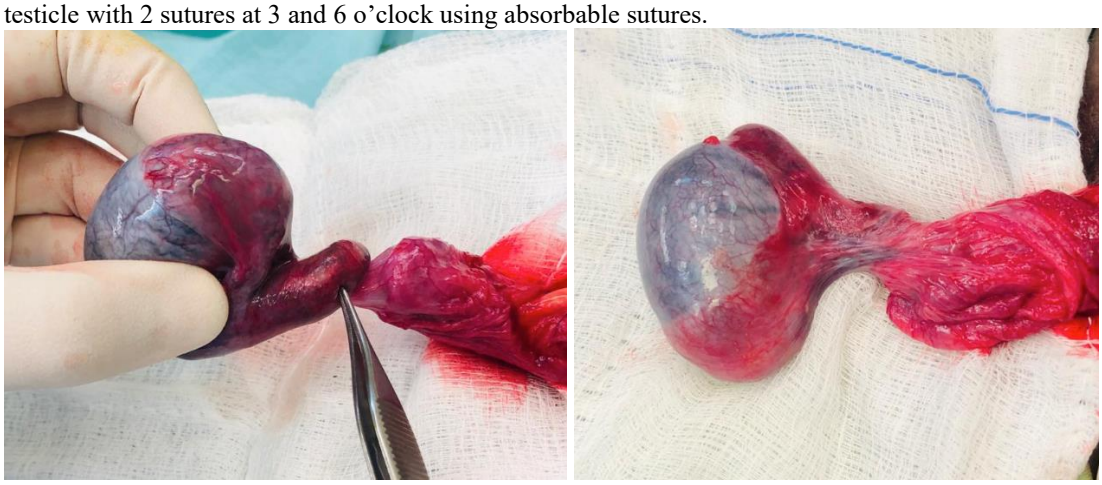

Figure 2: (a) The testicle on exploration with evidence of twisting and torsion. **(b)** After detorsion and 30 minutes of applying a hot saline compress.

The postoperative course passed uneventfully. On the 2nd postoperative day, Doppler US showed good vascularity [Figure 3]. Patient was seen at 1 and 6 months later at the urology clinic and the testicle showed normal size, normal consistency, and had normal blood flow [Figure 4].

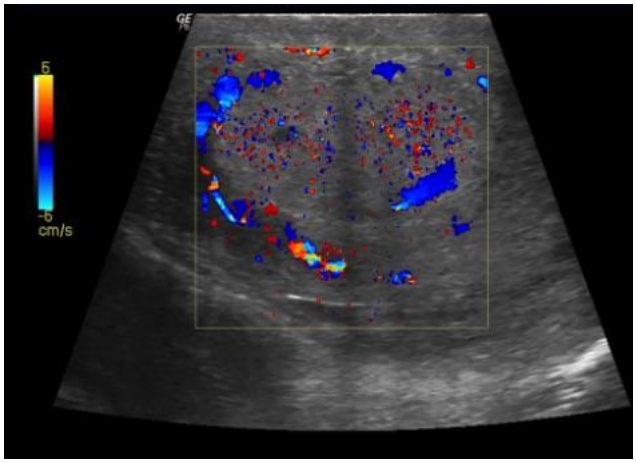

Figure 3: Doppler US on the 2nd postoperative day reported as status post-operative; right orchiopexy showing normal vascularity of the right testis denoting favorable management.

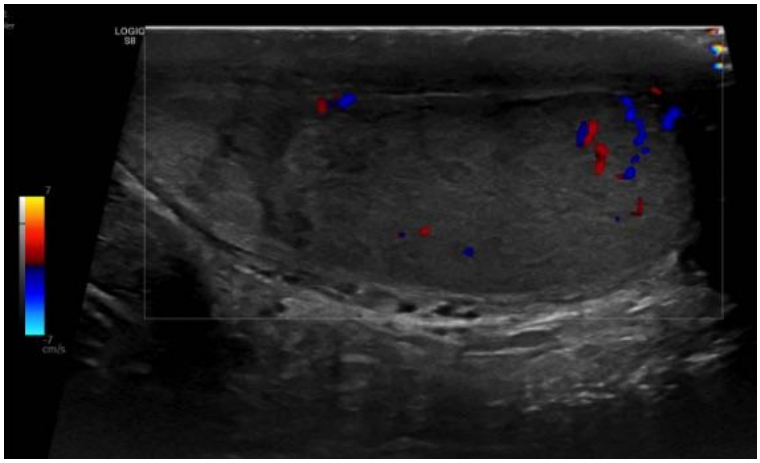

Figure 4: Doppler US, 3-months later shows normal appearance of the testicle with normal blood flow.

Discussion

Although testicular torsion (TT) is an infrequently seen condition, it raises a special concern. It could end with testicular loss which was reported in 42% of boys undergoing surgery for testicular torsion.[1] Subsequent orchiectomy has a negative impact on infertility and patient psychology. Torsion that ends with testicular loss is one of the most common diseases in medicolegal investigations.[5]

The pathophysiology of the torsion involves testicular ischemia, which if left uncorrected for a few hours (6-10), can result in wet gangrene that can progress to testicular death if left untreated for 24 hours or longer, even if the detorsion is performed.[6]

There is a range of survival times that could be explained by; differences in reporting the actual starting time of pain among patients and the degree of torsion. The recovery of the testicle in our case after a 72-hour delay, could be explained by the intermittent torsion, which was reported relatively infrequently in the literature.[3,4]

In our case, TT might have started as just episodes of torsion / detorsion with periods of pain and then pain-free intervals for 2-3 days, prior to a complete twist in the spermatic cord that led to the severe pain which was noticeable by the patient's parents. The complete twist could have happened a few hours before patient's arrival to the hospital. The time from patient's presentation to the ER to the starting of surgery is approximately 2.5 hours.

The presence of swollen scrotum could have been due to the delayed presentation that made the inflammatory reaction more obvious. Epididymo-orchitis (EO) which is one of the differential diagnoses of acute scrotum, is the most confusing diagnosis with a delayed TT. In a study that included 53 patients who had orchiectomy and were involved in a medicolegal aspect, 58% of those cases were given EO as a pre-diagnosis.[5] It is common to find reactionary hydrocele with delayed presentation TT, as in our case.

If the patient presents late, as in our case, and when EO is suspected, Doppler US can help in making the final diagnosis, especially if the Doppler US is available in the hospital. The presence of the spermatic cord twist and lack of blood flow to the testicle confirms the diagnosis of TT.

Intermittent TT may present in an acute or chronic setting. Blumer et al reported a similar case of intermittent TT patient who had acute pain on and off, and when examined TT was found and treated.[4] Al -Kandari et al included 63 patients in a retrospective study who had chronic scrotal pain due to intermittent TT. They were managed selectively either by conservative treatment or orchiopexy, and the latter was reported to be superior at controlling pain.[3]

As many as 50% of boys with TT have had prior episodes of testicular pain due to intermittent TT. Delayed presentation should not preclude patients from urgent scrotal exploration. Delayed presentation increases the probability of testicular loss, which obviously increases with duration before presentation, and this must be taken into consideration with regards to consent especially with the possibility of orchidectomy.

Moreover, this policy could protect against possible medicolegal issues.[5] It is always said, negative surgical exploration in cases of suspected torsion is less harmful than missing a TT that ends with testicular loss.

Conclusion

Delayed presentation of testicular torsion of more than 24 hours should not be a reason to delay scrotal exploration. This is most likely true because intermittent torsion may convert to a complete torsion and the chance of saving the testicle still exists.

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