

Case Report

A rare case of simultaneous bilateral testicular torsion in inguinal canal: A case report

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ABSTRACT

Background: Simultaneous bilateral testicular torsion in inguinal canal is a very rare condition which mandates prompt surgical intervention.

Case Presentation: We report a case of an adolescent male presenting with complaint of severe pain in left inguinal region. Diagnosis of bilateral testicular torsion with bilateral undescended testes was made clinically and supported by Doppler study. This was followed by emergent surgical exploration requiring left orchiectomy and right orchiopexy.

Conclusion: A high index of suspicion is required in any patient presenting with lower abdominal or groin pain and an empty scrotum to clinch the diagnosis and act promptly in an effort to salvage the testes. We believe, irrespective of the time elapsed since the onset of symptoms, surgical intervention should be undertaken as spontaneous torsion and detorsion might be happening, enabling testicular salvage.

Keywords: Cryptorchidism, Testicular torsion, Orchiectomy, Orchiopexy, Inflammation.

INTRODUCTION

Undescended testis or cryptorchidism is the absence of one or both testes in normal scrotal position. It may be palpable or impalpable.

Testicular torsion results from twisting of testis which results in compromised blood supply. Testicular torsion is seen most commonly in the age group of 10 to 25 years. If left untreated blood supply to testis may be completely cut off leading to ischemia, necrosis and testicular demise. Testicular torsion is a surgical emergency and prompt surgical correction can lead to testicular salvage. Testicular salvage rate is around 100 percent if untwisting is done within 6 hours while the testicular salvage rate drops to 20 percent if surgery is delayed for 24 hours.[1]

Testicular torsion can be intravaginal or extravaginal. Neonatal period accounts for the majority of extravaginal testicular torsion. As the attachment of tunica vaginalis to the scrotal wall is weak or under developed in the early infancy, it accounts for higher incidence of bilateral

torsion in this age group. With advancing age, as the tunica attachments become stronger, the incidence of this type of torsion decreases.[2]

Intravaginal torsion is predominantly seen in older children and adults and the common anatomic abnormality responsible for it is the bell clapper deformity. Normally the tunica vaginalis surrounds the testis all around except at the epididymis and the posterior scrotal wall. While in case of bell clapper anomaly, the attachment of tunica vaginalis to testis is inappropriately high permitting the rotation of spermatic cord within the sac and thus predisposing to intravaginal torsion. This anomaly is present bilaterally and thus justifies bilateral exploration even in cases of unilateral testicular torsion.[1,2]

CASE REPORT

An adolescent male of 16 years presented in our urology department with complaint of pain in left inguinal region for 2 days. Pain was sudden in onset which progressed

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to severe intensity within a span of 24-36 hours. There was no history of fever, vomiting, dysuria or any other urological complain. He had no history of trauma or any other comorbidities or any prior surgical intervention.

Physical examination revealed an underdeveloped empty scrotum. Testis was bilaterally palpable in the inguinal region just above and lateral to pubic tubercle. Tenderness was present on the left side while right side was non tender. Local temperature was raised along with other signs of inflammation on the left side. Right side did not reveal any gross abnormality. However inguinal lymph nodes were palpably on both sides. Rest of the examination was normal.



Figure: 1 Intraoperative picture showing necrotic non salvageable left testis

All routine blood reports including total leukocyte count were within normal limit. Doppler study of inguinoscrotal region revealed bilateral undescended testes with no demonstrable vascularity on either side.

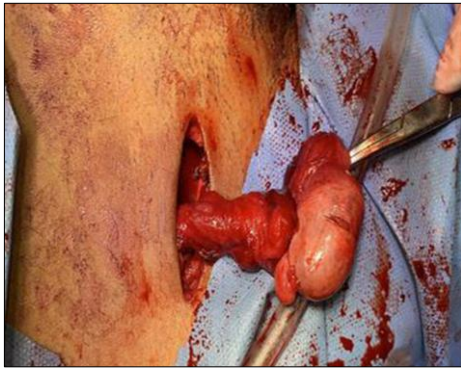


Figure: 2 Intraoperative picture showing grossly normal appearing right testis

Patient was informed about the existing condition and was planned for emergency exploration. After proper informed consent, patient was immediately shifted to emergency operation theatre. Bilateral inguinal exploration was done under general anesthesia. Left testis was found to be necrotic with 360 degrees rotation of spermatic cord (Figure-1). As the left testis was not

salvageable, left orchiectomy was done and the specimen was sent for histopathological examination. On the right side also, testis was twisted to 270 degrees. Detorsion of right testis was done. Right testis was grossly normal in appearance (Figure-2). Right orchiopexy was done and testis was placed in dartos pouch.

On second post-operative day, repeat doppler study of right inguinoscrotal region revealed normal testicular vascularity. Patient was discharged on third post-operative day.

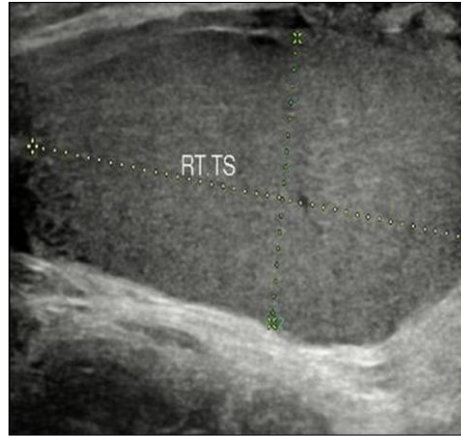


Figure: 3 Follow up Ultrasonography showing normal right testis

On follow up visits, the patient remained well and asymptomatic. Repeat doppler ultrasonography revealed a viable right testis with good vascularity (Figure 3 and 4). Histopathological report of left orchiectomy specimen was consistent with features of testicular torsion (degenerated tubules with vascular congestion) without any evidence of malignancy.

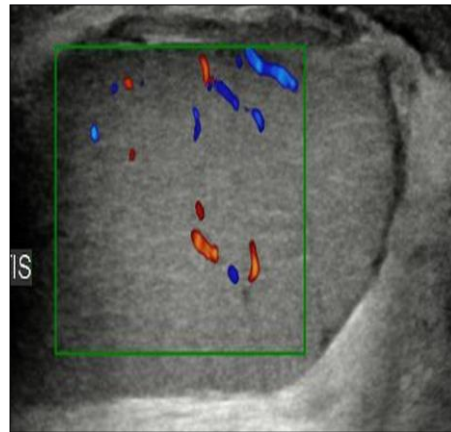


Figure: 4 Colour Doppler of right testis demonstrating normal vascularity.

DISCUSSION

Incidence of undescended testis is 4% at birth. About two thirds of these reach the scrotum during the first three months of life, but full descent thereafter is uncommon. The incidence of undescended testes

reduces to 1% around first year of life. Cryptorchidism is more common on right side and is bilateral in around 20% cases. Boys with undescended testis are at a greater risk of infertility, malignancy, hernia and testicular torsion.

Testicular torsion is more common in undescended testis owing to developmental abnormality between testis and its mesentery. Testicular torsion is a surgical emergency having bimodal peaks in adolescents and neonates. It is characterized clinically with sudden onset agonizing pain in the groin and lower abdomen with or without nausea and vomiting. Majority of bilateral cases are reported in neonates.[3] In 1985, Osada et al reported the first case of bilateral testicular torsion in a 12-years-old boy.[4] While the credit for reporting the first case of bilateral torsion in an adult goes to Wasnick and colleagues.[5] Even in unilateral cases of testicular torsion, the need for contralateral exploration and prophylactic orchiopexy has been constantly emphasized because of bilaterality of congenital deformity and possibility of torsion.[6,7] The magnitude of testicular damage depends primarily on two factors - time elapsed since the onset of symptoms and the degree of torsion. Tryfonas and co-authors encountered absent or grossly atrophied testis in all cases presenting with torsion of 360 degrees or more and symptom duration beyond twenty four hours.[8] Even Wright documented his findings to be in complete agreement with those of Tryfonas.[9] However Martin and Rushton did not find the existence of contralateral bell clapper deformity in boys with prior history of unilateral neonatal torsion, while in adolescents presenting with testicular torsion

they encountered this deformity on the contralateral side in most of their cases, emphasizing the importance of extravaginal and intravaginal torsion.[10]

In our case the patient presented forty-eight hours after the onset of symptoms, still right testicular salvage was possible. This could be explained by the possibility of torsion and detorsion which might happen intermittently.

In conclusion there should always be a high index of suspicion for testicular torsion when a boy with empty scrotum presents with lower abdominal pain, redness and groin swelling. If there is any doubt as to the diagnosis, then urgent surgical exploration is indicated. We believe, irrespective of the time elapsed, surgical intervention should be undertaken as spontaneous torsion and detorsion might be happening, enabling testicular salvage

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