

# Torsion of Appendix of Testis - Masquerading as Acute Epididymitis

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## ABSTRACT

A case of torsion of the appendix of testis is described in a 11 years old boy. He presented with sudden onset of severe pain in the left testis of 2 hour duration. Emergency exploration of the left testis revealed a torsion appendix of the left testis. The appendix of the testis was excised and the wound was closed. The patient made a smooth post-operative recovery.

**Keywords:** torsion, appendix testis, exploration.

## INTRODUCTION

Ombredanne was the first to mention about the torsion of the appendix testis in 1913, but the first case report was published in 1922 by Colt. It was schematically illustrated by Mouchet (1923) and Dix (1931) in a manner that is still valid today.

Torsion of appendix of testis is not a rare clinical entity. Majority of these cases present with unilateral scrotal pain and are managed conservatively. Rarely a definitive diagnosis is reached. Surgical intervention is not only useful in making the final diagnosis but excision of the necrotic appendix of testis can also be contemplated. The main aim of this case report is to highlight the importance of operative management in torsion of appendix of testis and to avoid the pitfall of diagnostic errors with available modalities

Testicular and epididymal appendages were once considered rare anatomical anomalies; however some studies report that these structures are present in the majority of normal individuals.<sup>[1]</sup> When these structures are too long or pedunculated, they can twist around their own axis, causing acute scrotum.

It is generally agreed that any male suspected of having a testicular torsion requires immediate surgical exploration. However differentiating testicular appendix torsion from epididymitis or

torsion of the testis, especially in young children, may prove very difficult.

## CASE REPORT

An 11 year old boy presented in emergency with a history of severe pain in left testis since 2 hours. There was no history of trauma, insect bite or urinary complaints. The pain was sudden in onset, severe in nature, sharp piercing type, not relieved by elevation of testis (Prehn sign) and not associated with any other symptom. On examination he was afebrile and there was an obvious swelling in the left scrotum associated with severe tenderness.[Figure 1] The left testis and epididymis were not separately palpable but the spermatic cord was normal.

Left side cremasteric reflex was present which favoured to rule out torsion testis. The right scrotum, testis and epididymis were normal, complete blood count and urine analysis was normal. With a clinical diagnosis of torsion testis in mind a ultrasound scrotum was advised.

On ultrasound it was found that the vascularity of testis is normal, there is no twist of the spermatic cord and the epididymal head is bulky in nature [Figure 2] an impression of epididymitis was given on the ultrasound.

However clinically it was difficult to explain the diagnosis of epididymitis in a 11 year old boy and after counseling the parents a decision to explore the scrotum was made.

On exploration it was found that there is no torsion of the testis as was evident on ultrasound however a small vestigial appendage was found attached to the

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testis with a long mesentery which was twisted [Figure 3].

It was excised and sent for histopathology. On pathological examination sections show columnar epithelium enclosing a vascular fibrous core with extensive hemorrhage and congestion and scattered glandular structures, [Figure 4] diagnosis consistent with appendix testis torsion.

The patient made a smooth post-operative recovery and was discharged on the second post-operative day.



Figure 1:

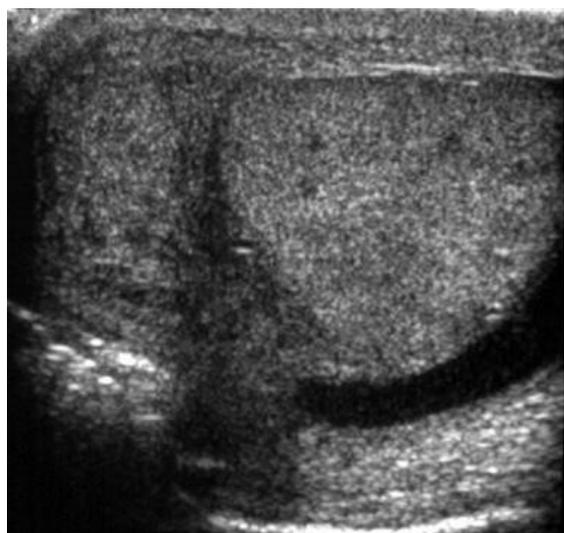


Figure 2:



Figure 3:

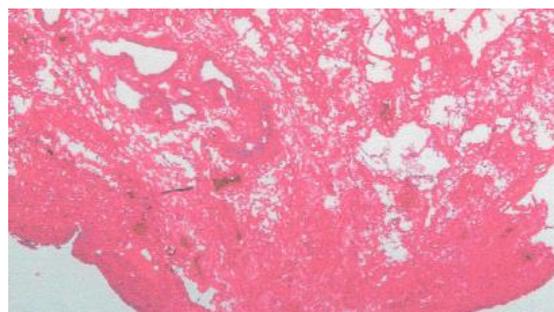


Figure 4:

## DISCUSSION

The testicular appendix is a remnant of the upper portion of the paramesonephric duct (Müllerian duct), and is also known as sessile Hydatid Of Morgagni.<sup>[2]</sup> The portion of mesonephric duct, cranial to the testis can form the epididymal appendix, also known as the Pedunculated Hydatid Of Morgagni.

Other vestigial structures derived from this portion of the mesonephric duct are the 'Haller's organs', located in the fissure between the testis and the epididymis, consisting of a superior and inferior aberrant vessels; and the 'Giraldes' organ', also called the paradidymis or innominate body, located in the distal portion of the spermatic cord.<sup>[3]</sup>

Amongst the patients presenting with acute scrotum, testicular torsion is the most common diagnosis in the prepubertal male.<sup>[4]</sup> In a study by Knight and Vassy of acute scrotal pain in 395 boys ranging in age from 30 days through 17 years,<sup>[5]</sup> the frequencies of diagnoses were: testicular torsion (38%), epididymitis or orchitis (31%) and torsion appendix testis (24%). Lewis et al,<sup>[6]</sup> reported torsion appendix testis in 46% of acute scrotal pain.

The torsion of appendix testis usually occurs in children aged 7–14 years. The condition rarely presents in adulthood. The pain is usually acute but may develop over time. It is located in the superior pole of the testis. Some patients may endure pain for several days before seeking medical attention. Systemic symptoms and urinary complaints are absent. On examination the scrotum may be erythematous and oedematous. The cremasteric reflex is usually present. The presence of cremasteric reflex is the most valuable clinical finding in ruling out testicular torsion and the absence of this reflex increases the suspicion of testicular torsion.<sup>[7]</sup> Tenderness may be absent; if present then it is localized in the upper pole of the testis. The presence of paratesticular nodule at the superior aspect of the testis, the characteristic blue-dot appearance, is pathognomonic for this condition. It is present in only 21% of cases. In our case it was absent.

Synchronous bilateral torsion of appendix testis can also occur.<sup>[8]</sup> Ultrasonography may show a lesion of low echogenicity with a central hypoechoic area. If the oedematous appendix and the head of the

epididymis are close together, the condition will have the 'Mickey Mouse' appearance on the transverse lie. Colour Doppler sonograms show normal flow to the testis, with an occasional increase on the effected side possibly due to inflammation. The identification of a testicular appendage larger than 5.6 mm is suggestive if torsion.<sup>[9]</sup> It has an 89% sensitivity and 100% specificity for testicular torsion.<sup>[10]</sup> In testicular appendix torsion, radionuclide imaging may show a hot-dot sign due to an area of increase tracer uptake.

The suspected cases of torsion of appendix of testis are usually treated with rest, observation, analgesics and scrotal support. Certain cases may not be diagnosed properly as they mimic epididymitis, as in our case. Presently surgical intervention is recommended in only doubtful cases, but we emphasize upon the benefits of prompt surgery, firstly excision of the necrotic tissue can be contemplated, secondly a definitive diagnosis can be reached and thirdly a satisfactory recovery of the patient can be achieved.

## CONCLUSION

Torsion of the appendix testis is a rare cause of acute scrotum and can be easily misdiagnosed as epididymitis, leading to gangrene and complications. Prompt surgical exploration should always be carried out in cases where clinical decision favours torsion.

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