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Case Report

An Incidental Case of Transverse Testicular Ectopia in an Adult!

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Abstract

Transverse testicular ectopia is a rare congenital entity usually presenting in childhood. It is characterised by abnormality in the usual pathway of testicular descent with both testis present on same side. We present here an incidentally detected case of transverse testicular ectopia in an adult. Though it is usually diagnosed intraoperatively, preoperative imaging and diagnosis can not only help the surgeon with better planning but also identify associated mullerian structural anomaly.

Keywords: Transverse testicular ectopia; Ultrasound; Computed tomography

Introduction

Transverse testicular ectopia is a rare congenital entity usually presenting in childhood. It is characterised by abnormality in the usual pathway of testicular descent with both testis present on same side. We present here an incidentally detected case of transverse testicular ectopia in an adult. Though it is usually diagnosed intraoperatively, preoperative imaging and diagnosis can not only help the surgeon with better planning but also identify associated mullerian structural anomaly.

Case Presentation

A 35-year-old male, known case of nasopharyngeal carcinoma presented to our hospital for treatment. CECT abdomen and pelvis was done for the evaluation of staging. The incidental finding in CT was left sided inguinal hernia with spermatic cord and fat as content (Figure 1A-1C). It was further noticed that the right scrotal sac was empty (Figure 1A) with the herniating spermatic cord reaching till scrotum (Figure 1D). Spermatic cord content including vas deferens and testicular artery was not visualized separately. Ultrasound of the scrotum performed (Figure 2), which demonstrated both testes located in left scrotum and empty right scrotum suggesting transverse testicular ectopia. There was no evidence of any persistent Mullerian duct structural abnormality.

Discussion

Absence of testis in scrotum is one of the commonly seen genitourinary anomalies with the undescended testis present along their pathway of descent. However ectopic testis is a rare variant with Transverse Testicular Ectopia (TTE) even rarer. There is deviation from normal descent pathway of testis in cases of ectopic testis with abnormal location of testis in femoral canal, perineum, penile, contralateral route (including superficial or deep ring, inguinal canal, and scrotum) or rarely in abdominal wall or preperitoneal locations. TTE is also rare with the migration of testis to contralateral side [1].

Based on clinical assessment and associated anomalies, it can be of various types: with inguinal hernia or processus vaginalis (~50%), with rudimentary mullerian duct structures (30%), other anomalies including hypospadias, pseudohermaphroditism and scrotal anomalies without persistent mullerian duct structures (20%), renal dysgenesis with PUJO rarely [2,3].

Clinically most patients present in childhood at ~4 to 5 years of age with inguinal hernia on one side and empty scrotum on other side [2]. We have reported an incidental adult case which is rare. It can be due to lack of awareness, education or low socioeconomic status. Diagnosis is commonly made intraoperatively during hernia repair. However it can be diagnosed preoperatively with imaging modalities in case of high clinical suspicion [4].

Around 20% cases of undescended testis are clinically non palpable. The role of imaging is controversial, however can be used not only to diagnose such cases but also to evaluate associated anomalies or malignancy. Imaging modalities that can be used are Ultrasonography (USG), Computerized Tomography (CT), and Magnetic Resonance Imaging (MRI). USG and MRI are done in suspected cases due to excellent soft tissue resolution and also being radiation free modality [5]. CT though involves radiation but can equally help in diagnosis in incidental cases with CT being done for other indication.

Ultrasound can detect palpable testis but has poor performance in the evaluation of non palpable testis. MRI has better accuracy, sensitivity and specificity but not widely available and expensive modality [6]. MRI being the best non invasive modality can reveal empty hemiscrotum with bilateral testis in contralateral hemiscrotum with its own spermatic cord. Each testis has its own blood supply and vas deferens however it is difficult to appreciate [7]. The characteristic on MRI of ectopic testis is hyperintense on T2 with hypointense linear structure, probably representing gubernaculum remnant. Use of MRV has also been reported by few to identify testicular vessels [8]. CT

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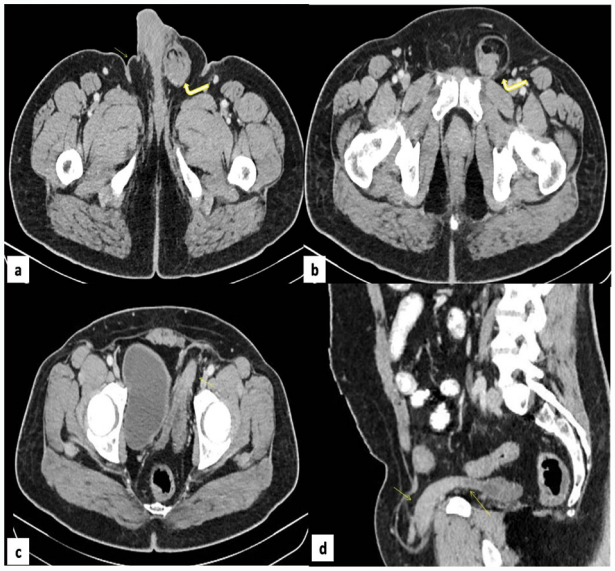

Figure 1: CECT abdomen and pelvis of 35 old male patient with TTE. Axial CECT (a, b, c) shows left side inguinal hernia having two spermatic cords and omentum as the content (solid bent arrow) with empty right inguinal canal. Right scrotum was empty (arrow in a). Both the spermatic cords coursing towards the left inguinal canal with mild displacement of the bladder (arrow in c). Left side inguinal hernia was seen with two spermatic cords and omentum as the contents (arrow in d).

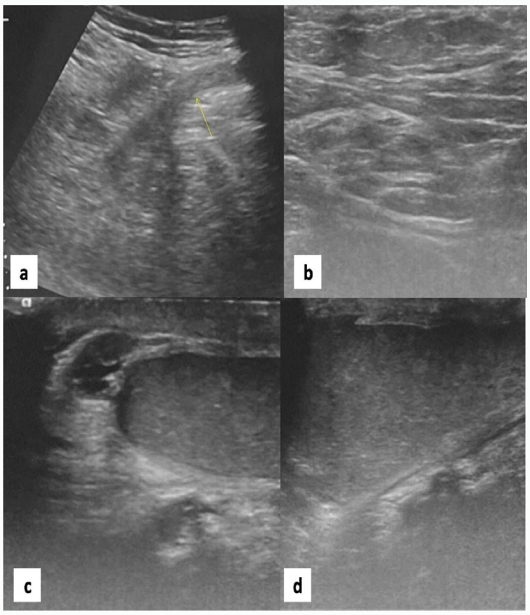

Figure 2: Ultrasound of inguinoscrotal region of 35 old male patient with TTE. USG image (a) showing left inguinal hernia (arrow). USG scrotum (b) showing empty right scrotal sac and bilateral testis in left scrotum (c, d).

not used commonly because of radiation hazard but can demonstrate similar finding as MRI with empty hemiscrotum and two testis on contralateral side. Inguinal hernia with its content (spermatic cord and fat in our case) can also be identified, as was incidentally detected in our case.

The primary treatment of TTE is orchiopexy which involves correct placement of ectopic testis wherever possible. In few cases where it cannot be mobilized and fixed in correct hemiscrotum, orchiectomy is performed considering the future risk of malignancy [9]. Appropriate imaging and preoperative localization not only helps in better planning of the surgery but also help diagnose associated anomalies. A radiologist must be aware of this entity to diagnose as well as look for other associated anomaly to guide operating surgeon.

Conclusion

Transverse testicular ectopia is rare form of ectopic testis, in which both the testis descend on ipsilateral side. Mullerian structural anomaly can be associated with this condition. The common presentation being inguinal hernia on one side with non palpable testis on the other side. A radiologist must be aware of this entity to diagnose as well as look for other associated anomaly to guide operating surgeon. Main treatment option is orchiopexy with orchiectomy reserved for few cases.

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