Case Report

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Torsed intraabdominal testis mimicking acute appendicitis in a 60 year old male

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ABSTRACT

We present a case of 60-year-old male who came to our emergency room with complaints of severe pain in right lower abdomen. Based on history, clinical examination and investigation, we made a provisional diagnosis of acute appendicitis. We explored the patient and found a torsed intraabdominal testis just below the deep ring. Histopathology of the resected specimen showed gangrenous testis.

Keywords: Appendicitis, Cryptorchidism, Orchidectomy

INTRODUCTION

Cryptorchidism (or maldescended testis) is a common problem encountered in pediatric age groups. Despite more than 100 years of research, many aspects of cryptorchidism are not well defined and remain controversial. However, cryptorchidism clearly has deleterious effects on the testis over time. 1-4 These an increased risk for testicular tumor development and a propensity for torsion. In cases of bilateral undescended testis, infertility is a concern. The role of diagnostic tools such as ultrasound, computed tomography (CT) and magnetic resonance imaging (MRI) in localizing a non-palpable testis have been associated with low sensitivity and specificity rate.5 European Society for Paediatric Urology (ESPU) guidelines on paediatric urology and cryptorchidism states that "there is no reliable examination to confirm or exclude an intraabdominal, inguinal or absent/vanishing testis except for diagnostic laparoscopy.6 Torsion of an intraabdominal testis is a rare cause of acute lower abdominal pain.^{7,8} The

torsion of an intra-abdominal testicle was first reported by Gerster in 1898 and by Ormond in 1923. There are almost 60 cases reported in the literature.^{9,10} Generally, a twisted intra-abdominal testis is recognized as an emergency in young men, and is associated in most cases with abdominal pain and is often related to malignant degeneration.

With a history of undescended testis, it is difficult to establish the diagnosis and to exclude other emergency abdominal conditions without a laparotomy. Torsed intraabdominal testis is rarely considered in the differential of acute appendicitis, probably because of a failure to examine the external genitalia as part of the abdominal examination. Most patients with an undescended testis, especially adults, are aware of the absence of the testis within the scrotal sac. The purpose of this report is to highlight a case of torsed abdominal testis which presented with features of acute appendicitis in a 60-year-old man who was unaware of the absence of the right testis within the right hemiscrotum.

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CASE REPORT

A 60-year male presented to Emergency Room of our hospital with complaints of pain right lower abdomen for past three days. This pain started relatively suddenly, progressively worsened and had no relation with posture. No referral, radiation or shifting of pain was reported. There was no history of vomiting, alteration in bladder and bowel habits or fever. There was no history of significant previous ailments. On examination, patient was in severe agony due to abdominal pain. He was conscious and oriented with following vitals: blood pressure 120/80 mmHg, pulse 104bpm, respiratory rate 20 per minute, and temperature 37.8° C. Chest and cardiovascular examinations were normal. On abdominal examination, there was marked right iliac fossa tenderness associated with guarding and positive release signs. The Psoas, Rovsings and Obturator signs were all positive. Bowel sounds were normal; there was no ascites. Examination of the external genitalia showed a vacant, small-sized right hemiscrotum. The left hemiscrotum and testis were normal. His scrotum did not have a median raphe. Rectal examination was normal. Blood investigations revealed total leucocyte count of 7000/mm³ with neutrophils 80%. Blood chemistry, urine examination and x-ray abdomen were normal. Ultrasound of abdomen showed a localized collection of 4 x 3 cm with a tubular structure inside with impression of perforated appendix /abscess. Based on history, clinical examination and available investigations we made a diagnosis of acute appendicitis with a second possibility of torsion of intra-abdominal testis. Both the possibilities were discussed in detail with the patient and the relatives and consent for appendectomy and orchidectomy was obtained. We performed lower midline laparotomy and found appendix grossly normal There was torsed intraabdominal testis just below the deep ring which was completely gangrenous. We did orchidectomy along with appendectomy (Figure 1). Postoperative period was uneventful. Histopathology of specimen gangrenous testis.



Figure 1: Gangrenous torsed intra-abdominal testis.

DISCUSSION

Several studies have shown that torsion is more common with an undescended testis compared with a completely descended testis. 11-13 Osime et al reported the average age of torsion in their series to be 18.2 years. 14-16 Torsion of the intraabdominal testis has been reported in a neonate and during childhood, but more cases are reported after puberty. An undescended testis may torse in the inguinal canal, where it is readily palpated, making the diagnosis much more obvious. However, when the undescended testis torses intraabdominally, physical examination alone may not be sufficient to make a correct diagnosis.¹⁷ Radford et al reported a case of inguinal undescended testis which presented as acute appendicitis and concluded that an intraabdominal testis can lead to acute life-threatening complications and therefore should be considered in any patient with acute abdominal symptoms who has an "absent" testis. 18,19 In terms of intraabdominal testis, studies have shown that torsion is more common when there is an associated tumor of the testis.^{20,21} However, several other studies have reported torsion of the testis with a normal histological picture of the testis.²² Candiaz et al have even reported a case of torsioned intraabdominal testis with an atrophic "testis". Because torsion of the intraabdominal testis is more common on the right confusion with the diagnosis of acute appendicitis may arise. Making a correct diagnosis of torsed intraabdominal testis requires a high index of suspicion and a thorough physical examination of the abdomen and genitalia; when an empty scrotum is found, a higher clinical suspicion must arise. ^{23,24} Several studies have highlighted methods to accurately predict the diagnosis of acute appendicitis, one of which is the Alvarado (MANTRELS) scoring system. Using this scoring system, our patient had a score of 6 (anorexia, nausea, right iliac fossa tenderness, elevated temperature and a leukocytosis) indicating a high likelihood of acute appendicitis. The finding of an apparently normal appendix led to a search for other possible causes of acute abdomen, and the torsed testis was found. In centers where high-resolution ultrasound scan, computerized axial tomography scan and magnetic resonance imaging are available, such studies should be performed before surgery.^{25,26} In terms of management of the torsed abdominal testis, several authors recommend orchiectomy because most such torsed testes have lost their viability.²⁷ In addition, there is an increased risk of malignancy and formation of antibodies against the contralateral normal testis. While most mention the torsed tests located in the scrotum, with the pain referred to the right iliac fossa, most standard textbooks do not include torsed intraabdominal testis in the differential of acute appendicitis. We here share our experience with a 60year-old man who had torsed intraabdominal testis.

CONCLUSION

Clinicians should be aware that an intraabdominal testis can mimic acute appendicitis. Genital examination should be routinely included in abdominal examination for suspected appendicitis; when the right hemiscrotum is found not to contain a testis, there should be a high index of suspicion for a torsed testis. Finally, when a grossly normal vermiform appendix is found at operation in a patient who was thought to have acute appendicitis, every effort should be made to search for other possible causes of that tenderness.

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