INTERNATIONAL JOURNAL OF HEALTH & MEDICAL RESEARCH

ISSN(print): 2833-213X, ISSN(online): 2833-2148

Volume 04 Issue 10 October 2025

DOI : 10.58806/ijhmr.2025.v4i10n02

Page No. 573-575

When Hernia Isn't a Hernia: Testicular Torsion of an Ectopic Gonad Mimicking Incarcerated Inguinal Hernia: Case Report

ETTAOUSSI Abdelhak[1], JAMALEDDINE Khalid[2], AHED Youssef[3], KAMAL Khadija[4], MAJD Abdessamad[5], BOUALI Mounir[6], ELBAKOURI Abdelilah[7], EL HATTABI Khalid[8]

[1,2,3,4,5,6,7,8]Department of general surgery, IBN ROCHD University hospital of Casablanca, Casablanca, Morocco

Corresponding author: JAMALEDDINE Khalid

ABSTRACT: Introduction: Inguinal swellings in children and young adults are frequently diagnosed as hernias or hydroceles. However, rare conditions can present with nearly identical symptoms, leading to potential misdiagnosis and severe outcomes. We report a critical case of testicular torsion in an intra-abdominal undescended testis that clinically mimicked an incarcerated inguinal hernia.

Case Presentation: A 20-year-old man with a history of bilateral cryptorchidism and cerebral palsy presented with a painful, irreducible right inguinal swelling and vomiting. Preoperative ultrasonography was performed. Despite imaging, a diagnosis of incarcerated inguinal hernia was made. Urgent surgical exploration revealed a necrotic, torsed testis within the inguinal canal, necessitating orchidectomy.

Discussion: This case highlights a significant diagnostic pitfall. Torsion of an undescended testis can perfectly mimic an incarcerated hernia. Cognitive anchoring bias likely contributed to the misinterpretation of preoperative ultrasound findings. The absence of the testis in the scrotum is the most crucial clinical clue that must trigger suspicion for torsion.

Conclusion: Torsion of an ectopic testis must be a primary consideration in any male with a tender, irreducible inguinal mass and cryptorchidism. The physical exam finding of an empty scrotum should override ambiguous imaging results. A high index of suspicion is essential for testicular salvage.

KEYWORDS: Testicular Torsion; Ectopic Testis; Cryptorchidism; Inguinal Hernia; Diagnostic Error; Cognitive Bias; Case Report.

1. INTRODUCTION: Inguinal swellings are a common presentation in surgical practice, with indirect inguinal hernias and hydroceles representing the vast majority of cases [1,2]. The standard care for a painful, irreducible swelling is prompt surgical exploration to prevent complications like bowel strangulation and gonadal infarction [3,4].

However, the classic signs of an "incarcerated hernia" can mask other critical conditions. Testicular torsion, a urological emergency, typically causes acute scrotal pain. However, when the testis is undescended or ectopic (found in approximately 1-3% of males [5]), the torsion occurs proximally, and the presenting symptom is a painful groin or abdominal mass [6]. The absence of the testis in the scrotum is a key finding frequently overlooked during the initial assessment.

This case report describes a patient with all the classic features of an incarcerated inguinal hernia who was found to have torsion of an ectopic testis. We discuss the diagnostic challenges, including the role and limitations of imaging and the impact of cognitive bias.

2. Case Presentation

A 20-year-old man with a known history of bilateral cryptorchidism and cerebral palsy presented to the emergency department with a 12-hour history of sudden-onset, severe right groin pain and vomiting. On examination, he was tachycardic and in obvious distress. Abdominal examination was unremarkable. A firm, exquisitely tender, irreducible mass was found in the right inguinal region. Crucially, palpation of the scrotum revealed an empty right and left hemiscrotum.

Ultrasound revealed two soft tissue masses with similar echogenic, homogeneous characteristics. One was located intra-abdominally on the right (29 × 24 × 15 mm), and the second in the left inguinal region (20 × 13.4 × 9.3 mm), both showing vascularization on color Doppler. The testes were not visualized within the scrotum.

A preliminary diagnosis of an incarcerated right inguinal hernia was made. Given the irreducible nature of the mass and significant pain, the patient was taken for urgent surgical exploration.

Operative Findings: Through a standard right inguinal incision, a tense, discolored mass was identified within the inguinal canal. Upon opening the hernia sac, no bowel or omentum was found. The mass was identified as a necrotic testis that had undergone a 720-degree torsion around its spermatic cord. The testis was ectopic, located at the level of the deep inguinal ring. The vascular pedicle was thrombosed, and the testis was non-viable (Figure 1). A right orchidectomy was performed.

Figure 1: The right ectopic non-viable testis discovered at the deep inguinal ring.

The patient's postoperative course was uneventful. He was discharged on postoperative day 2 and was referred for follow-up to discuss left orchidopexy.

3. DISCUSSION

This case illustrates a profound diagnostic challenge where a rare urological emergency perfectly mimicked a common surgical condition. Despite preoperative imaging, the diagnosis was missed, leading to orchitectomy. This underscores the limitations of diagnostic tools when interpreted through the lens of a powerful clinical heuristic like "irreducible inguinal mass equals incarcerated hernia."

3.1. The Misleading Clinical Picture and Anchoring Bias The patient’s presentation—acute pain,vomiting, and an irreducible inguinal mass—is a classic description of an incarcerated inguinal hernia [4]. This often leads to a cognitive anchoring bias [9], where this initial diagnosis takes root, and subsequent information is interpreted to confirm it, while contradictory clues are discounted. The key finding of bilateral empty scrotums, a clear red flag for cryptorchidism, was noted but did not sufficiently alter the preoperative diagnostic anchor.

3.2. The Role and Limitations of Preoperative Imaging Our case demonstrates that even when performed,ultrasound can be misleading if its findings are not critically reconciled with the clinical examination. The ultrasound correctly identified the ectopic gonads but reported vascularity in the right-sided mass. This was likely a misinterpretation or a technical limitation. In testicular torsion,the diagnostic ultrasound finding is an avascular or heterogeneously hypoechoic gonad, often with the "whirlpool sign" of the twisted spermatic cord [8]. The reported vascularization may represent a pitfall: false-positive flow on Doppler can occur due to artifact, or the torsion may have been intermittent, allowing for detectable—though compromised—flow at the time of the scan. This highlights that sonographic diagnosis in an ectopic location is highly operator-dependent and requires a specific suspicion to identify subtle signs of ischemia.

3.3. The Critical Differential Diagnosis This experience reinforces that the differential diagnosis for an irreducible inguinal mass in a male must always include torsion of an undescended testis,especially when cryptorchidism is present [3,6]. Other mimics include spermatic cord lipomas and Richter's hernia [4,7]. Among these, testicular torsion is the most time-sensitive. The combination of an irreducible mass and an empty scrotum should override ambiguous imaging results and point directly toward surgical exploration for potential torsion.

3.4. Reconciling Findings and Lessons for Management The management pathways for an incarcerated hernia and testicular torsion,while both urgent, have different goals. The former aims to reduce bowel and repair the hernia, while the latter is a race against time to attempt detorsion and orchidopexy. The ultimate diagnosis was made by surgical exploration—the gold standard. The key lesson is to enter the operating room with a heightened awareness for torsion when cryptorchidism is present, ensuring the surgical team is prepared for either scenario.

4. CONCLUSION

A painful, irreducible inguinal mass in a male is not always a hernia. Torsion of an undescended testis is a devastating mimic that must be immediately considered, particularly with a history of cryptorchidism. The cardinal clinical rule is to palpate the scrotum for the presence of both testes. If a testis is absent, this finding must override all others, including seemingly reassuring ultrasound results. As this case demonstrates, preoperative imaging can be misinterpreted if influenced by a strong clinical anchor. The absence of the testis in the scrotum should heighten the surgeon's awareness of torsion, prompting urgent exploration with a primary focus on the gonad. A high index of suspicion remains the most critical tool for testicular preservation.

Provenance and Peer Review: Not commissioned, externally peer-reviewed.

Consent:Written informed consent was obtained from the patient's parents for publication of this case report and any accompanying images. Consent was obtained from the parents due to the patient's cerebral palsy, which impacts his ability to provide informed consent.

Ethical Approval:Ethical approval was obtained from the Institutional Ethical Committee of Ibn Rochd University Hospital.

Conflicts of Interest:The authors declare no conflicts of interest regarding the publication of this paper.

Source of Funding:None.

REFERENCES

1) Jadhav DL. A Study of Inguinal Hernia in Children. [MS Thesis]. Rajiv Gandhi University of Health Sciences; 2010.
2) Riaz B. Genital Abnormalities and Groin Hernias in Anganwadi and School Going Boys in Kaiwara PHC Area. [MS Thesis]. Rajiv Gandhi University of Health Sciences; 2006.
3) Ameh EA, Amoah JO, Awotula OP, Mbibu HN. Scrotoschisis, bilateral extracorporeal testicular ectopia and testicular torsion. Pediatr Surg Int. 2003;19(6):497-498.
4) Abdullah SA, Glenn IC, Ponsky TA. Incarcerated pediatric hernias. Surg Clin North Am. 2017;97(1):129-145.
5) Cortes D, Thorup J, Visfeldt J. Cryptorchidism: aspects of fertility and neoplasms. Horm Res. 2001;55(1):21-7.
6) Lavallee ME, Cash J. Testicular torsion: evaluation and management. Curr Sports Med Rep. 2005;4(2):102-4.
7) Cabarrus MC, Yeh BM, Phelps AS, Ou JJ, Behr SC. From Inguinal Hernias to Spermatic Cord Lipomas: Pearls, Pitfalls, and Mimics of Abdominal and Pelvic Hernias. RadioGraphics. 2017;37(7):2063-2082.
8) Jamadar DA, Jacobson JA, Morag Y, Girish G, Dong Q, Jamadar FS, et al. Sonography of inguinal region hernias. AJR Am J Roentgenol. 2006;187(1):185-190.
9) Croskerry P. The importance of cognitive errors in diagnosis and strategies to minimize them. Acad Med. 2003;78(8):775-80.