



Testicular Dislocation is Secondary to Blunt Abdominal Trauma. Clinical Case

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Abstract

Introduction: TDD is the dislocation of a testicle from its normal location outside the scrotal sac, occurring after blunt force injury to the groin. It can be unilateral or bilateral, depending on injury and the presence of underlying predisposing abnormalities, such as a wide external ring, an indirect inguinal hernia, and atrophic testes.

Clinical case: An 18-year-old male admitted to the emergency department after being involved in a motorcycle accident while driving at a speed of 80 km/h and colliding with the side of a vehicle, causing a skid. He had multiple injuries and lacerations on his body that limited his movement. Physical examination revealed a soft abdomen, tenderness on deep palpation in the flank and right iliac fossa; a mass measuring approximately 5 cm seen and palpated in the left iliac fossa, a scrotal sac, and an absent left testicle. Included the following diagnoses: The patient suffered multiple blunt force trauma, blunt abdominal trauma, and fractured left femur. Resuscitation with crystalloid solution, analgesia, wound dressing, and coverage, and the patient scheduled for emergency surgery. Performed a left inguinal examination in the operating room. Found a scrotal sac in the left inguinal canal. Opened the sac, and identified the left testicle with discoloration, a spermatic cord with multiple areas of ecchymosis and hematomas, and an area of necrosis in the medial third of the cord. Performed a left orchiectomy.

Discussion: TTD is the most common cause of motorcycle accidents. The absence of the testicle in the scrotal sac should raise suspicion of a dislocated testicle, and an ultrasound or CT examination should try to find it. The most common site of dislocation is the inguinal canal. Early surgical treatment with reduction and orchidopexy is essential to reposition the testicle and preserve spermatogenesis.

Keywords: Abdominal trauma; Testicular dislocation; Motorcycle accident

Introduction

Traumatic testicular dislocation (TTD) is a rare consequence of blunt scrotal trauma. This condition was previously known as

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traumatic dislocation of the testis and first described by Claubry in 1818 in a person run over by a wagon wheel [1]. TDD is the dislocation of a testicle from its normal location outside the scrotal sac, which occurs after blunt injury to the groin. It may be unilateral or bilateral, depending on the mechanism of injury and the presence of underlying predisposing abnormalities, such as a wide external ring, indirect inguinal hernia, and atrophic testes [2]. DTT is classified into two groups: 1) internal dislocation (abdominal, canalicular, acetabular and femoral), in which the testis is forced through the external ring into the inguinal canal or abdominal cavity, and 2) superficial dislocation (superficial inguinal, pubic, penile, femoral and perineal), in which the testis is forced subcutaneously into a circular area whose radius is equal to the length of the spermatic cord from the external inguinal ring [3].

A complete physical examination, including palpation of both testicles, is crucial in patients with abdominal or pelvic trauma to avoid late diagnoses that could compromise testicular viability. Imaging techniques such as Doppler ultrasound and computed tomography are useful to confirm the location and viability of the displaced testicle. Treatment of traumatic testicular dislocation involves manual or surgical reduction of the testicle to its normal anatomical position. In cases, orchidopexy may be necessary to prevent future dislocations or complications such as infertility or malignant changes. Early intervention is critical to maximize the likelihood of preserving testicular function.

Clinical Case

An 18-year-old male admitted to the emergency room after being involved in a motorcycle accident while traveling at a speed of 80 km/h and colliding with the side of a vehicle, causing a skid. He suffered multiple injuries and lacerations to his body that limited his movement.



Figure 1: Mass of approximately 5 cm in the left iliac fossa.

He denies any significant medical history. A Physical examination revealed normal vital signs, with a pain-prone face, conscious, awake, and cooperative, Glasgow score 15. Adequate skin and integument coloration, chest with adequate amplexion and amplexation movements, auscultation revealed vesicular murmur without added sounds. Rhythmic heart sounds of good tone and intensity. Soft abdomen, painful to deep palpation in the

flank and right iliac fossa; a mass of approximately 5 cm seen and palpated in the left iliac fossa, scrotal sac with absence of left testicle (Figure 1). Right thoracic extremity with dermabrasion in the external lateral region, left thoracic extremity intact. Left pelvic extremity with deformity and edema at the level of the distal third of the femur, pain on movement and a laceration wound measuring approximately 2 cm, capillary refill time of 2 seconds, and distal pulses present. Laboratory studies only with increased leukocytes (22.1), the rest normal, imagen CT scan study (Figure 2).



Figure 2: CT scan shows increased volume in the left inguinal region, compatible with a left testicle.



Figure 3: Testicle in the left inguinal canal.



Figure 4: Necrosis and hematoma of the elements of the left testicular cord.

Diagnoses integrated: Multiple blunt force trauma, blunt abdominal trauma, and fracture of the left femur. Resuscitation with crystalloid solution, analgesia, wound dressing, and antibiotic coverage. In the operating room performed a layered dissection, showing a scrotal sac lodged in the left inguinal canal. Open the sac, and a left testicle identified with discoloration, a spermatic cord with multiple areas of ecchymosis and hematomas, and an area of necrosis in the medial third of the cord. Performed a left orchiectomy (Figures 3,4). The patient with satisfactory progress discharged from the hospital.

Discussion

The diagnosis of testicular dislocation (TTD) can miss, especially in patients with multiple traumatic injuries, so the history and physical examination are crucial for its evaluation. The presence of a void in the scrotum or even a palpable lump detected by a thorough physical examination. Therefore, a thorough physical examination plays a vital role in diagnosis. An ectopic testis easily missed. Clinicians should pay attention to whether the patient has had cryptorchidism previously. Therefore, in cases of multiple traumas, especially to the pelvis, groin, perineal area, and scrotum, patients should be alert to the possibility of TDD [4].

This type of injury is common in motorcycle accidents (80%), occurs at an early age (20 years) and is usually unilateral. This entity occurs in <0.5% of closed abdominal trauma [5,6].

The diagnosis fails in patients with minor trauma, in whom a CT scan is not needed, or if the scrotum is not examined. Studies reported nine patients with inguinal trauma in whom the diagnosis of testicular dislocation was initially missed, and the delayed diagnosis made an average of 19 days later. For diagnosis, CT and understanding the cause of the injury are important, especially in cases involving palpation of the scrotum and presentation of a scrotal hematoma [7,8].

Conclusion

TDD is the most common cause of motorcycle accidents. The absence of the testicle in the scrotal sac should raise suspicion of a dislocated testicle, and localization should be tried with ultrasound or CT examination. The most common site of dislocation is the inguinal canal. Early surgical treatment with reduction and orchidopexy is essential to reposition the testicle and preserve spermatogenesis.

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