

Traumatic Dislocation of the Testis: A Rare Case Report and Review of Literature

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ABSTRACT

Traumatic dislocation of the testis is a rare clinical presentation that occurs most commonly as a result of a blunt scrotal injury. An early diagnosis and subsequent surgical management is of utmost importance for normal spermatogenesis and to prevent

the risk of orchidectomy. We are reporting here, a unilateral dislocation of the testis into the crural position in a patient, which was caused by blunt trauma following a fall from height, which was managed by open surgical reduction and orchidopexy. This case has been reported for its rarity.

Key Words: Traumatic, Dislocation, Testis, Orchidopexy

INTRODUCTION

Testicular dislocation is a rare complication of testicular trauma and it is defined as the displacement of one or both normally located testes out of the scrotum [1]. It occurs as a result of direct external pressure to the perineum, which dislocates the testis to the surrounding soft tissue (typically the groin) [2]. Traumatic dislocation is the result of accidents which are involved while high-speed vehicles are driven, especially motor cycles. The associated injuries may preclude the early detection and the reduction of the dislocated testis. The dislocation may be unilateral or bilateral. The possible sites are superficial inguinal (most common), truly abdominal, pubic, canalicular, penile, acetabular, crural and perineal [3].

It is immensely important to prevent any delay in diagnosis and the subsequent management, as this can lead to the loss of the spermatogenic function of the testis and an increased risk of orchidectomy [2]. Closed reduction is the initial treatment of choice. Open surgical reduction is recommended for possible testicular torsion or rupture.

CASE REPORT

A 30-years old male patient presented to the emergency department of the Fr Muller Hospital following a fall from height. The patient sustained an injury over the back and the scrotum. He complained of pain over the lower back and swelling and pain over the left upper thigh. On examination, the patient was found to be fully conscious and oriented, his Glasgow coma scale was 15/15 and he was haemo-dynamically stable. Tenderness was present over his upper lumbar spine, he had no neurological deficit and his B/L straight leg raising test was less than 60 degrees. On inspection, his scrotum was found to be normal, except for some ecchymoses over the left side. His penis was normal and an oval shaped swelling was present over the upper medial aspect of the left thigh, which measured about 5x6 cm, with ecchymoses. On palpation, his left testicle was found to be absent in the left hemiscrotum and a tender swelling was present over the left upper medial aspect of the thigh. The patient gave a history of normal scrotal left testis before the fall. USG of his scrotum confirmed dislocation of the left testis in the medial aspect of the left upper thigh, with normal testicular blood flow, with minimal scrotal haematoma and



[Table/Fig-1]: Photograph showing dislocated left testis into the upper medial aspects of left thigh

haematoma surrounding the testis, with possible testicular rupture. An X-ray of his spine showed compression fracture of the lumbar 1 and 2 vertebrae, for which a spinal brace was put. The patient underwent exploration under general anaesthesia. His left testis was found to be in the crural region and he had a normal testis with minimal scrotal haematoma and cord haematoma. Haemostasis was done and the testis was reduced back to the left side of the scrotum. It was fixed to the dartos muscle with absorbable sutures (orchidopexy). The patient recovered well and he was discharged on the third postoperative day. His scrotal skin sutures were removed on the seventh postoperative day.

DISCUSSION

Claubry, in 1818, described the first case of bilateral traumatic dislocation of the testes, which occurred in a 20-year old soldier who was run over by a wagon wheel [4]. In our patient, the



[Table/Fig-2]: Operative photograph showing dislocated left testis with cord hematoma

testicular dislocation occurred due to blunt trauma following a fall from height. The dislocation may be superficial (the testis is forced into the superficial inguinal pouch) or internal (the testis is forced through the external ring into the inguinal canal or even into the abdominal cavity). Superficial inguinal pouch is the commonest reported location for a dislocated testis and it occurs in 40-50% of the cases [2]. The possible sites with a relative frequency are: superficial inguinal-50%, truly abdominal-6%, pubic-18%, penile-8%, canalicular-8%, acetabular-8%, perineal-4% and crural-2% [3]. In our patient, the testicular dislocation occurred in the rare crural position. Most of the dislocations occur immediately after the trauma, although some may develop days or even weeks later. The dislocation of the testis is commonly unilateral, but it can be bilateral too, as it has been seen in about 30% of the cases [3, 5]. The factors that lead to the dislocation of the testis are identified as a spasm of the cremasteric muscle, a wide external inguinal ring, presence of indirect inguinal hernia, and an atrophic testis [5].

Ultrasonography is the first method of choice while evaluating a patient with testicular trauma [5]. The scrotal sac is well developed in the traumatic dislocation of the testis as compared to cryptorchidism, where it is underdeveloped (Broekman's sign) [6]. Also, the dislocated testis is typically normal in size, unlike the atrophy which is expected in a cryptorchid testis. Colour Doppler imaging can help in assessing the viability of the testis. Scrotal haematoma and haematocele are some of the commonly associated injuries which are present along with the dislocation of the testis [5]. In our patient, USG of the scrotum showed dislocation of the left testis into the upper medial aspect of the left thigh, with normal testicular blood flow, with minimal scrotal haematoma and haematoma

surrounding the testis, with possible testicular rupture. Closed manual reduction is the initial treatment of choice. Open surgical reduction is recommended for testicular torsion and rupture. We did exploration haemostasis, open reduction and orchidopexy because of the haematoma which surrounded the testis with a suspected capsular tear.

Kochakarm *et al.* reviewed 36 patients with traumatic testicular dislocation from 1975 to 1997. Closed reduction under general anaesthesia was successful in 14 cases, open reduction after a failed closed reduction was successful in 10 cases, open exploration and a repaired testis with reposition was successful in 11 cases and orchiectomy was successful in 1 case. The overall results after the treatment showed the testes to be of normal size and position. The success of the closed reduction was attributed to the fact that the patient was seen early, before significant oedema developed [7]. The prolonged extrascrotal location of these testicles, all resulted in some degree of infertility due to a prolonged exposure to an elevated temperature. Delays in the reduction can result in irreversible testicular changes. The authors have recommended that if the testis can be imaged adequately to ensure its tunical integrity and appropriate blood flow, then closed reduction is the initial treatment of choice. The closed reduction may be aided by sedation to enhance the cooperation of the patient, as well as by muscle relaxation to facilitate the procedure. If the attempt fails, then another attempt should be made under general anaesthesia, and should it again fail, surgical reduction should be performed immediately. An immediate surgical intervention should also be performed when sonography reveals rupture or torsion of the testis or when a concomitant injury to the testis exists.

REFERENCES

- [1] Sakamoto H, Iwasaki S, Kushima M, Shichijo T, Ogawa Y. Traumatic bilateral testicular dislocation: A recovery of spermatogenesis by orchidopexy 15 years after the onset. *Fertil Steril* 2008; 90:e9-11
- [2] Bromberg W, Wong C, Kurek S. Traumatic bilateral testicular dislocation. *J Trauma* 2003; 54:1009-11
- [3] Schwartz SL, Faerber GJ. Dislocation of the testis as a delayed presentation of scrotal trauma; *Urology* 1994; 43:743-5.
- [4] Claubry EG. Observations sur une retrocession subite des deux testicules dans l'abdomen, a la suite d'une violente compression de la partie inferieure de la paroi abdominale par une roue de charrette. *J Gen Med Chir Pharm* 1818; 64:325-30
- [5] Kilian CA, Paz DA, Patel SA, Austin MJ, Richman KM, Pretorius DH. A false diagnosis of ruptured testes in a case of traumatic dislocation. *JUM* 2009; 28:549-53.
- [6] Ihama Y, Fuke C, Miyazaki T. A two-rider motorcycle accident involving injuries around the groin area in both the driver and the passenger. *Legal Med* 2007; 9:274-7
- [7] Kochakarm W, Choonhaklai V, Hotrapawanond P, Muangman V. Traumatic testicular dislocation, a review of 36 cases. *J Med Assoc Thailand* 2000; 83:208-12.

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FINANCIAL OR OTHER COMPETING INTERESTS:

None.

Date of Submission: **Nov 28, 2011**
 Date of Peer Review: **Dec 10, 2011**
 Date of Acceptance: **Dec 22, 2011**
 Date of Publishing: **May 01, 2012**