Bilateral Traumatic Dislocation of Testes

Dislocation of the testis is a rare trauma. Its diagnosis depends on the awareness of the physician of its possible occurrence. It is usually a late finding during treatment of a motorcyclist brought to the emergency room because of multiple trauma injury and is sometimes demonstrated in the computerized tomographic (CT) scanning of the pelvis. We encountered bilateral dislocation of testes in a 40-year-old male due to motorcycle accident. Color Doppler ultrasonography was helpful in locating the dislocated testicle and detecting its blood flow. CT scans are often obtained to evaluate the associated injuries and to examine the area of the dislocated testis to help identify a rupture. Closed reduction is the initial treatment of choice. Immediate surgical intervention should also be performed when closed reduction has failed.

CASE REPORT

A 40-year-old male was sent to our hospital after a motorcycle-car collision. He rode a straddle motorcycle at a high speed and collided with a car. The patient was hemodynamically stable and neurologically intact on arrival at the emergency room. Physical examination revealed abrasion over his face, nose, chin, left leg, and both thighs and ecchymosis over the scrotum. The patient complained of pain in the groin. Examination revealed absence of both testes, and soft tender masses over bilateral inguinal regions were noted (Fig. 1). He was certain that both testes were present in the scrotum before the accident. The patient denied any history of testicular retraction, cryptorchism or inguinal hernia in the past. So the soft tender masses over the bilateral inguinal regions were considered to be dislocated testes. Pre-operative urine specimen was free of blood, and pelvic X-ray revealed no fracture. Color Doppler ultrasonography of the scrotum showed the bilateral testes were intact over the bilateral inguinal region, with normal size. Both demonstrated normal and symmetric blood flow pattern. Contrast-enhanced computerized tomographic (CT) scanning of the pelvis revealed both testes in the subcutaneous area of bilateral inguinal region (Fig. 2). The patient was placed in the Trendelenburg position, and manual reduction was done under 50 mg intramuscular meperidine and 10 mg intravenous diazepam sedation. The attempt failed, and another attempt was done under general anesthesia, but it failed too, so an operation was performed immediately. On exploration, both dislocated testes were viable but were bluish in the subcutaneous tissue of the inguinal regions, just outside and lateral to the external ring. Both testes...
were returned to the scrotum and bilateral orchiopexy was done with routine Darto’s pouch method after a biopsy. Biopsy of both testes showed normal histology. The patient recovered well and no recurrence was noted during 12 months’ follow-up. The patient reported normal erectile function, and semen analysis also revealed no abnormally.

**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. Dislocation of testis is defined as the displacement of normally located 1 or both testes to a position other than the scrotum. Goulding classified dislocation of the testis into 2 groups: (1) internal dislocation where the testis is forced through the external ring into the inguinal canal or even to the abdominal cavity; (2) superficial dislocation where the testis is forced subcutaneously in a circular area having the radius as the spermatic cord length from the external inguinal ring as the center. Superficial dislocations are more common than internal dislocations. Our patient belonged to dislocated bilateral superficial inguinal testes.

In earlier times, many cases were the result of accidents in which a wheel ran over the scrotum, falling injury, or a kick to the perineum. This mechanism has been replaced in the more modern reports by straddling injuries from motorcycle accidents. On impact, the sudden deceleration of the motorcycle catapults the rider forward. Because the rider is straddled over the saddle, his perineum and scrotum are struck in the midline by the gasoline tank. The shape of the tank is such that it drives a smooth wedge into the groin area, forcibly displacing each testis in a lateral and superior direction.

Color Doppler ultrasonography is helpful in locating the dislocated testicle. It is also useful for postoperative follow-up. If the ultrasonography reveals rupture or torsion of the testis, surgical exploration is indicated and manual reduction is contraindicated. CT scans are often obtained to evaluate the associated injuries and to examine the area of the dislocated testis to help identify a rupture. If the scrotum is included in the study, the position of the testicle or the empty hemiscrotum can be easily detected.

Goulding recommends initial manual reduction. If manual reduction fails at the time of presentation, he recommends manual reduction again on the third or fourth day after injury when edema has subsided but before fibrous adhesions have developed. Boardman warned that the main risk of delayed reduction was that torsion of the dislocated testis could be missed and an originally viable testis could become gangrenous. Del Villar and associates found a 45% orchiectomy rate with delayed exploration versus a 9% orchiectomy rate with early operation.

Kochakarm et al. reviewed 36 patients with trau-
matic testicular dislocation from 1975 to 1997. Closed reduction under general anesthesia was successful in 14 cases, open reduction after failed closed reduction in 10 cases, open exploration and repaired testis with reposi-
tion in 11 cases and orchiectomy in 1 case. The overall results after treatment showed the testes to be of normal size and position. The success of closed reduction was attributed to the fact that the patient was seen early, before significant edema developed. 12

The prolonged extrascrotal location of these testicles all resulted in some degree of infertility due to prolonged exposure to elevated temperature. Delays in reduction can result in irreversible testicular changes. Absent spermatids, decreased spermatogonia and a relative increase in Sertoli cells have been found.1,7 Malignant changes are another risk of prolonged ectopic locations of a testicle.13 Semen analysis of our case revealed no abnormality because of early operative reduction.

We recommend that if the testis can be imaged adequately to ensure its tunical integrity and appropriate blood flow, closed reduction is the initial treatment of choice. Closed reduction may be aided by sedation to enhance cooperation of the patient as well as muscle relaxation to facilitate the procedure. If the attempt fails, then another attempt should be done under general anesthesia, and should it again fail, surgical reduction should be performed immediately. 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