Bilateral post traumatic anterior shoulder dislocation

Sir,

Unilateral traumatic shoulder dislocation is a common injury but bilateral shoulder dislocations are rare. The most frequently seen bilateral dislocations are posterior following convulsions. Bilateral anterior shoulder dislocation after trauma have rarely been reported. We found only 8 previously reported cases in the literature. We report a rare case of bilateral traumatic anterior shoulder dislocation and discuss the mechanism of injury.

A 43-year-old male, electrician, presented to our department following a fall off a ladder from a height of 10 feet. He described his arms being hyper-extended at the elbows and abducted at the shoulders as he tried to land on either side of the ladder on his outstretched hands.

Clinical examination was suggestive of bilateral anterior shoulder dislocations. He had altered sensation over his right deltoid, however deltoid function was normal on both sides. The radial pulse was present bilaterally. The radiographs confirmed the bilateral anterior shoulder dislocations (Figures 1, 2). The right shoulder dislocation was associated with greater tuberosity fracture. Both dislocations were reduced closed using the Kocher’s technique under general anaesthesia (Figures 3, 4). The greater tuberosity fragment on the right side was well reduced and hence did not require surgical fixation. Post manipulation, he did not have any worsening of neurological deficit. Both shoulders were immobilised in broad arm polyslings in adduction and internal rotation.

At 4 weeks both shoulders remained reduced. He had no discomfort on the left side but paresthesia over the right deltoid had persisted. At 9 weeks, the shoulder function had improved significantly. At 12 weeks he had forward flexion and abduction of 100 degrees on both sides. External rotation was about 20 degrees with internal rotation up to L3 spine. The altered sensation over the right deltoid had disappeared.

Unilateral shoulder dislocation is a very common orthopaedic presentation. Bilateral dislocations are unusual. In the past there have been a few reported cases of bilateral posterior shoulder dislocation but anterior dislocations have rarely been reported to our knowledge. Most cases with posterior dislocations were following convulsion due to epilepsy, electroconvulsive therapy or in patients with neuromuscular problems. Simultaneous undiagnosed bilateral anterior dislocation has been described in an elderly woman and in young patients during weight training. This patient had no significant past medical history and no history of previous dislocations. There was a history of significant trauma. Both the arms were extended at the elbows and abducted at the shoulders as the patient tried to land on either side of the ladder. The fall pushed both arms out into further extension at the shoulders with associated external rotation that left only the muscles and the joint capsule as the stabilising factors. The mechanism of injury was consistent with the anterior dislocation.

The shoulder is the most commonly dislocated joint in the
Figure 3: Post manipulation film of right shoulder showing accurate reduction. The greater tuberosity is well reduced.

Figure 4: Post reduction films of left shoulder showing accurate reduction

body, accounting for 85% of all dislocations. Ninety-five per cent of shoulder dislocations are anterior. Ten per cent of these are associated with greater tuberosity fracture. Bilateral anterior dislocations after injury however are rare, mainly as the mechanism necessary to produce such injury is unusual.

Though there are controversies as to whether operative intervention is necessary in younger patients, in patients over forty, most surgeons agree that the first line of treatment would be conservative, as the re-dislocation rate in this age group is less likely. The best position to place the arm in for optimum results is also being re-evaluated. Classical rehabilitation with progressive passive and active physiotherapy of both shoulders is mandatory. The aim of the article is to report this rare injury and to highlight the mechanism that produces such injury.

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References

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Vascular complication following lipid free propofol injection

Sir,
Propofol is widely used in anaesthesia practice with established safety and efficacy. Recently, a lipid-free formulation (Cleofol 1%, Themis Medicare, Mumbai, India) has become available in the Indian market. This clear solution contains 10 mg of propofol and excipients to make 1 ml of the preparation. The details of the excipients are not available in the product information.

The product information states that thrombosis and phlebitis are rare on accidental extravasation and intra-arterial injection in animals showed minimal tissue reaction. We report a suspected case of an unusual vascular complication following administration of this preparation.

A 55-kg, 35-year-old, ASA I female was posted for laparoscopic cholecystectomy under general anaesthesia. After placement of routine monitors, an 18G intravenous cannula was inserted in the most prominent vein on the dorsum of the left hand. Anaesthesia was induced with propofol 120 mg following administration of pethedine 60 mg. Tracheal intubation was facilitated with vecuronium bromide 6 mg. Maintenance of anaesthesia was done with vecuronium and intermittent positive pressure ventilation with 60% nitrous oxide and 0.6% isoflurane in oxygen. The same intravenous cannula was used to inject ceftriaxone 1 g, ondansetron 4 mg and lactated ringer’s solution during the procedure. After about one hour, when the procedure was about to end, swelling of the whole of the dorsum of the left hand was noticed. An extravasation was immediately ruled out as there was a good flow of the intravenous fluid without any swelling around the puncture site or around the cannula tip, which could be palpated easily. Further examination revealed that the palmer aspect had become dusky and the radial pulse could not be felt. It was suspected that the anti trendelenburg position along with a right side up tilt of the operating table for the procedure had caused a compression of the neurovascular bundle in the axilla leading to the problem. But interestingly, both the axillary and brachial pulsation could be felt normally as compared to the opposite side.

Immediately, the intravenous cannula was removed after placing another one in the right hand. A stellate ganglion block was performed on the left side using 15 ml of bupivacaine 0.5% followed by 5000 I.U. of intravenous heparin. Pulse oximeter probe, when applied to the fingers of the left hand did not display any reading.

Neuromuscular blockade was reversed uneventfully using neostigmine and glycopyrrolate in the usual dose. The patient’s left hand was wrapped in cotton wool with fingers exposed and was kept elevated. She could move her fingers on command. Approximately 30 min later, radial pulse reappeared and