

Irreducible posterolateral elbow dislocation

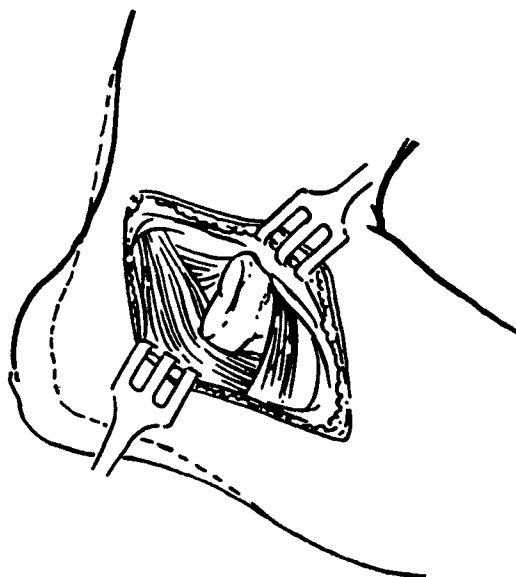
A case report

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It is extremely rare that a posterolateral elbow dislocation resists closed reduction. The condition is characterized by the presence of a prominent radial head that is caught in a buttonhole tear of the lateral collateral ligament and capsule.



Figure 1. A 24-year-old man with a posterolateral dislocation of the left elbow. Preoperatively.



Operative findings. The radial head buttonholes the capsule and the lateral collateral ligament.

A 24-year-old man sustained an injury to his left elbow playing football, probably a fall on the outstretched arm. Within 20 minutes of the injury, he presented to the casualty department with a posterolateral dislocation of the left elbow. Distal pulses were present and there were no associated injuries. Radiographic examination confirmed the diagnosis and did not show any fracture (Figure 1). Closed reduction under general anest-

hesia with muscle relaxation was attempted. This failed to relocate the elbow. The procedure was then repeated twice without success. No further attempts were made.

It was then noticed that the radial head was easily palpable under the skin, and open reduction was performed; under tourniquet control, a lateral incision was made over the prominent radial head. As soon as the skin and subcutaneous tissues were incised, the radial head came into direct view. The lateral collateral ligament and the joint capsule had been split by the radial head, which buttonholed through, making closed reduction impossible (Figure 1) Anterior soft-tissue

interposition prevented visualization of the ulnar coronoid. When the extremely tight lateral structures were divided distally to the radial neck, thus enlarging the buttonhole, reduction was easily achieved and stability was ascertained, both in flexion and in extension.

The annular ligament was found to be intact, and the wound was closed with drainage. Reduction was then confirmed radiographically. A plaster back slab was applied with the elbow just beyond 90 degrees and in mid-pronation. The result was satisfactory with rapid restoration of movement except for the last few degrees of extension.

Discussion

Most elbow dislocations are posterolateral (Josefsson & Nilsson 1986). Closed reduction by simple traction with the elbow at a right angle usually reduces the dislocation. However, on very

rare occasions, a mechanical block to reduction is encountered in fractures around the elbow joint.

Neviaser et al. (1977) reviewed 115 patients with elbow dislocations, 29 of which had necessitated open reduction and internal fixation. Associated fractures were found involving medial epicondyles, radial heads, capitella, and less commonly, lateral epicondyles.

Linscheid & Wheeler (1965) reviewed 110 patients with similar injuries. Only 2 patients had dislocations necessitating open reduction; both had associated intraarticular fractures. Pawlowski et al. (1970) reported a purely posterolateral dislocation that had to be openly reduced. However, the block to reduction was caused by proximal bowstringing of the radial and annular ligaments without any buttonholing of the radial head.

Devadoss (1967) reported a case where the cause of mechanical block was similar to ours, but the patient was a 7-year-old child.

References

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