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# LATERAL DISLOCATION OF THE ELBOW

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A rare case of a pure lateral dislocation of the elbow joint is presented. Attempts at closed reduction were unsuccessful. At operation the anconeus muscle was found to be interposed between the articular surfaces of the joint preventing reduction.

*Key words:* elbow; lateral dislocation; anconeus muscle intrapment; operative treatment

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Dislocation of the elbow joint is a very common injury, but a variant of this lesion, viz., the pure lateral dislocation of the elbow is extremely rare. Linscheid & Wheeler (1965), reviewing 110 cases of elbow dislocation at the Mayo Clinic over a period of 15 years, found only two cases of lateral dislocation. In Robert's report (1969) of 60 elbow dislocations there are only two cases of lateral dislocation. This specific type of elbow dislocation is also mentioned as being a very uncommon injury by other authors (Smith 1954, Rock & Green 1975).

The rarity of this lesion and the role played by the anconeus muscle in preventing closed reduction in our case justify this report.

## CASE REPORT

A 35-year-old woman working on a farm fell from a mule onto her left arm and injured her elbow. She was admitted to the hospital a few hours later with a very painful, swollen and deformed elbow joint. The forearm was fixed in pronation and there was a slight varus deformity.

Roentgenograms showed a lateral dislocation of the elbow without fracture of the joint (Figure 1). Under general anaesthesia attempts at closed reduction were unsuccessful and therefore open reduction was performed.

The elbow joint was exposed using a posterior approach. The reduction of the dislocation was prevented by a tight band of the stretched anconeus muscle pressing against and folding the capsule into the dislocated joint. This fold of the capsule along with the tight band of the muscle over it was interposed between the lateral condyle and the trochlear notch obstructing the reduction (Figure 2). Reduction was achieved almost spontaneously when the anconeus muscle was dissected from its ulnar insertion.

The joint was immobilized in 90° flexion for 3 weeks in a plaster slab. After 6 months of physiotherapy a considerable range of elbow movement was regained with flexion-extension of 60 to 150° and full pronation-supination.

## DISCUSSION

Pure lateral dislocation of the elbow is very rare (Rock & Green 1975). It is usually the most soft tissue damaging injury of all the varieties of elbow dislocation (Smith 1954) and therefore its closed reduction is an easy procedure.

However, difficulties in closed reduction can be encountered and are usually due to avulsion of the medial or lateral condyle of the humerus. This becomes in-

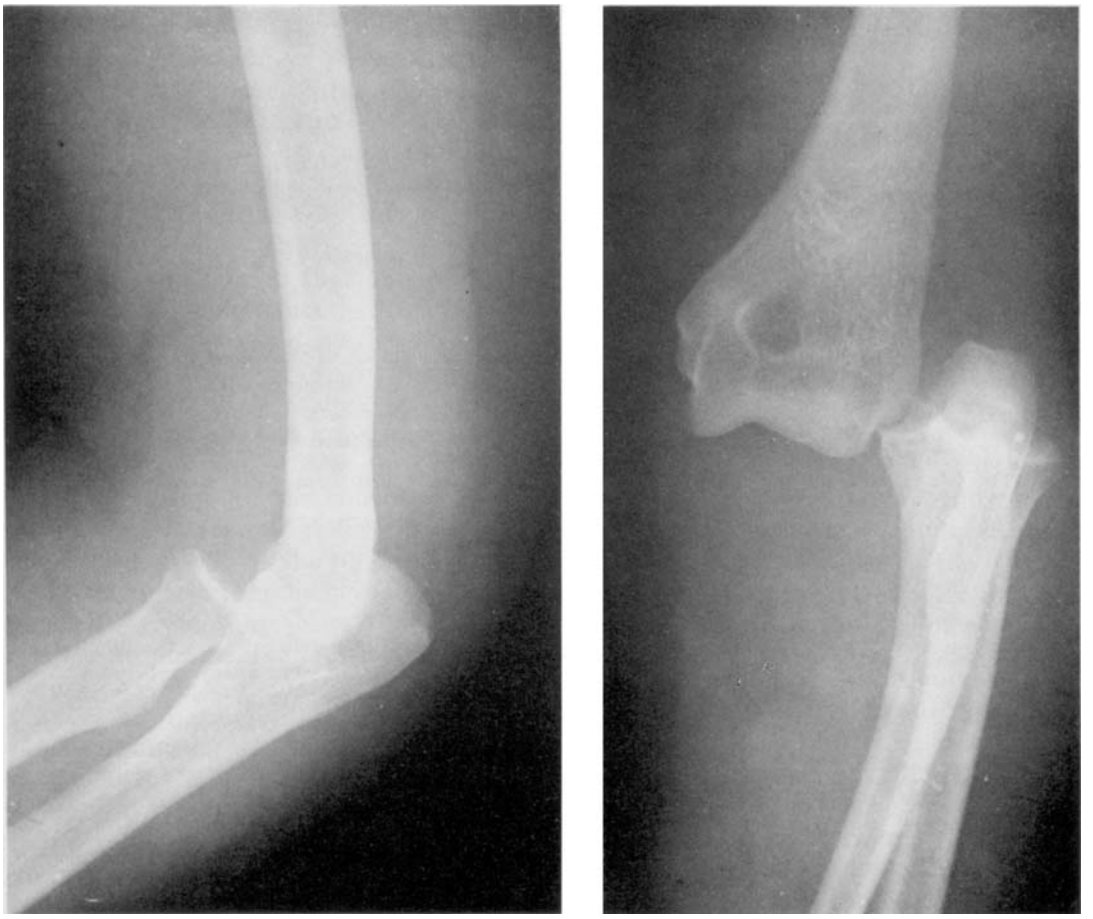

*Figure 1. X-ray showing the pure lateral dislocation of the elbow joint.*

serted in the elbow joint preventing the reduction. Such avulsed fractures very often accompany this type of injury, especially in children (Watson-Jones 1957, Wilson 1960, Vijaya 1966).

Soft tissue interposition can also prevent closed reduction of this dislocation as in the case reported by Smith (1954). In his patient the brachialis muscle was found at operation to obstruct the closed reduction, although the capitellum was also avulsed in this particular case.

The anconeus muscle is another factor which can prevent reduction of this injury. Whenever this muscle remains intact it is stretched and may be displaced into the trochlear notch, obstructing the reduction, as it is then interposed between the lateral humeral condyle and the ulna (Figure 2). This was found in our case and an almost automatic reduction was achieved after the extra-articular dissection of the anconeus muscle from its ulnar insertion.

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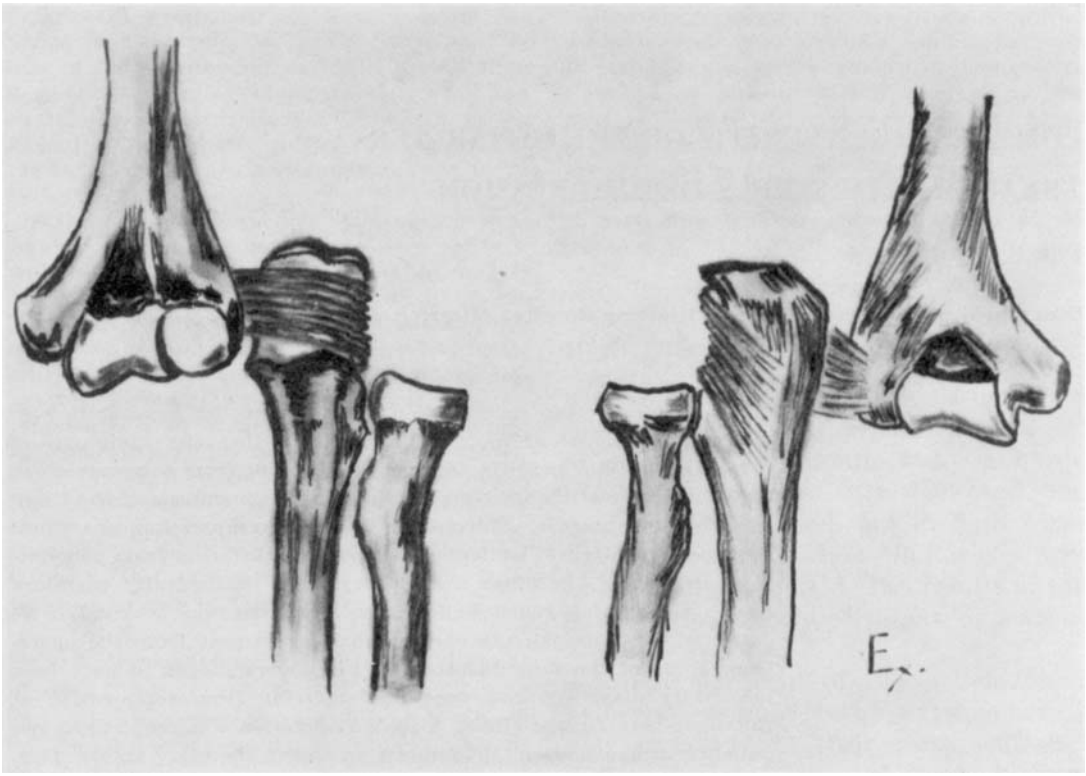

*Figure 2. Schematic drawing of the lateral dislocation showing the undamaged anconeus muscle occupying the trochlear notch and obstructing the reduction.*

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