



## Isolated Traumatic Radial head dislocation in adult

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Date of Submission: 15-11-2020

Date of Acceptance: 30-11-2020

**ABSTRACT:** Isolated radial head dislocation following trauma is a relatively rare injury in adult. Without fracture of the ulna it is very rare. Only a few cases are reported in the literature. If not detected early then it invariably requires open reduction. Undetected dislocation of the radial head restricts pronation and supination along with flexion of the elbow. In neglected cases the radial head may need excision to regain the elbow movements. In children it is usually a subluxation of the head and is more common. We are presenting a case of traumatic anterior dislocation of the radial head without any associated fracture of ulna in a 35 years adult male. He presented immediately and was reduced by closed method.

**Key Words:** Radial head; isolated dislocation; adult; trauma;

### I. INTRODUCTION:

Isolated traumatic radial head dislocation is a rare injury in adult. Only a few such cases are reported till date [1-9]. They are relatively more common in children and adolescent [10,11]. Most of the radial head dislocation is associated with fracture ulna [12]. Failure to diagnose the dislocation early leads to loss of elbow function mostly in terms of flexion and pronation-supination [5,13]. Conservative management by closed reduction and immobilization is the mainstay of getting good functional outcome. In delayed presentation, open reduction and reconstruction of the annular ligament may be required; and in few cases excision of the radial head may be necessary to gain elbow movements [5,13].

### II. CASE REPORT:

The patient was a healthy adult male of 35 years age who fell down from a bicycle and sustained injury to his left elbow. Mode of injury was fall on outstretched hand. He was presented to our emergency room immediately following injury. On examination his vitals were normal; no injury to any other areas of the body except the left elbow

was noted. The elbow was mildly swollen and tender over the lateral aspect. Flexion-extension movement was of full range but painful. Pronation-supination was more painful and restricted. The radial head was palpable anteriorly. No neurovascular deficit was found and the patient did not show any laxity of other joints.

X ray of the injured elbow ordered and it revealed antero-medial dislocation of the radial head; no fracture was noted in the ulna. A small fleck of bone was noted anterior to the radial head [Fig 1].

The patient was immediately transferred to operation theatre and closed reduction was done under anaesthesia. The radial head was felt relocated in its place with a click. The post-reduction X ray confirmed the normal position of the radial head [Fig 2]. The elbow was immobilized in a posterior POP slab for three weeks and then mobilized. The patient reported once at 8 weeks with normal range of movement and no pain.

### III. DISCUSSION:

Radial head dislocation without fracture of ulna is very uncommon. They are relatively more prevalent in children [10,11,12]. In adult isolated radial head dislocation is very rare. When occurs the usual presentation is pain and swelling of elbow with restriction of the elbow function mostly flexion and pronation-supination. In late cases they may present with a stiff elbow.

Mechanisms of dislocation described by various authors have different opinions. They mostly opined that indirect transmission of force in different position of elbow might be responsible for dislocation of the radial head in different direction. It may dislocate with fall in pronation of an extended elbow [7] or traction injury to the elbow and crush injury to the forearm [6] or fall in a position of hyperextension and supination [4]. Takami et al however described a direct trauma to a semiflexed elbow resulting anterior dislocation of the radial head [13]. Usually the patient has a good range of flexion and extension but restriction of



pronation and supination movement[7]. Closed reduction under anaesthesia is usually achieved by a pronation supination movement along with direct pressure over the radial head[4]. The reduced elbow is immobilized in a plaster cast for a period of 3 to 4 weeks. Most authors immobilized the elbow in flexion and supination[1,6,9,10]. Some prefers flexion and pronation as position of immobilization[3,4].

Neglected or missed cases require surgical intervention. In polytrauma situation it is usually missed[14]. They are managed either by excision of the radial head or by open reduction and reconstruction of the annular ligament[5,13,14].

In our case the possible mechanism may be fall with elbow in flexed and pronated position leading to posterior dislocation. We reduced the head by pronation-supination movement along with direct pressure over the radial head and immobilized in flexed and supinated position of the elbow for a period of three weeks.

#### IV. ACKNOWLEDGEMENTS:

Written consent was obtained from the patient for publication of study. Funding was neither sought nor obtained.

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**Figure Legends:**

**Figure 1:** Pre-reduction X-Ray showing antero-medial dislocation of radial head.



**Figure 2:** Post-reduction X-Ray.

