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# The Implication of Fat Pad Sign in Occult Elbow Fracture

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## Abstract

**Introduction:** The elbow is frequently involved in trauma and is one of the most frequently radiographed joint in emergency ward.

Posterior fat pad displacement has been describing in a variety of disorder such as hemophilia, rheumatoid arthritis and any condition that concomitant with joint effusion such as trauma. So it may be the manifestation of an Occult fracture as a result of trauma.

**Objective:** The purpose of this study was to assessment the implication of posterior fat-pad sign in occult elbow fracture.

**Materials and Methods:** This research is a prospective and descriptive study that carried out on 328 patients with the age under 18 years old and a history of traumatic elbow injury.

All of patients with the radiographically positive posterior fat pad sign, without any intraarticular fracture were introduced in study. After 3 weeks the injury, anteroposterior, lateral, and oblique radiographs were made and evaluated for evidence of fracture healing ( Periostial reaction). If there was evidence of new bone formation on any of this three radiographs, it was considered to indicate a fracture of elbow.

**Result:** From 328 patients, 73% (242) were boys and 26%(86) were girls. 29(96)% of patients were posterior fat pad positive sign that 85%(82) of above patient after 3 weeks become positive they had evidence of a fracture and in 18% (14) of patient hadn't any evidence of fracture. 82% (65) of patients had supracondylar fracture, 41% (5) a fracture of lateral condyl humerus, 1.64% (2) a fracture of medial condyl humerus.

**Conclusion:** This study demonstrated that the prevalence of posterior fat-pad sign with the evidence of fracture in elbow is very high and need to evaluate the patients with occult fracture correctly is very important.

**Key words:** Adipose Tissue/ Elbow Joint/ Fracture, Closed