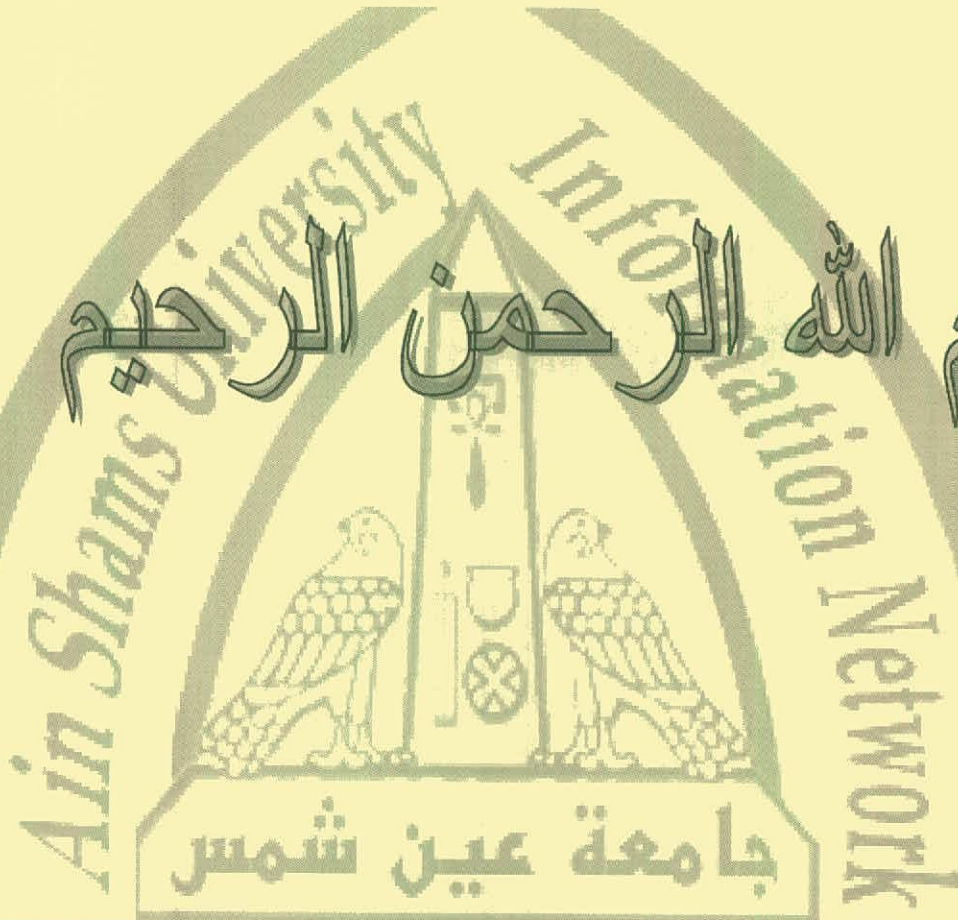




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EARLY OPEN REDUCTION AND INTERNAL FIXATION OF INTERCONDYLER FRACTURE HUMERUS IN ADULT

Thesis

*Submitted in partial fulfillment of the requirements of the Master
degree in*

Orthopaedic Surgery

By

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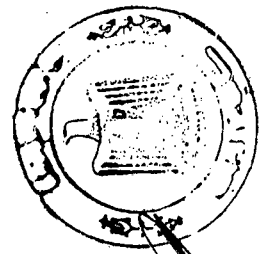
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2002**



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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(سَنُرِيهِمْ آيَاتِنَا فِي الْآفَاقِ وَفِي أَنْفُسِهِمْ حَتَّى يَتَبَيَّنَ

لَهُمْ أَنَّهُ الْحَقُّ ، أَوْ لَمْ يَكُنْ بِرَبِّكَ إِلَهٌ

عَلَى كُلِّ شَيْءٍ شَهِيدٌ)

(سُورَةُ فَصَّالٍ ، الآية ٥٣)

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INTRODUCTION

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INTRODUCTION

Intercondylar fracture humerus in adults is rare ⁽¹⁾ and notoriously difficult to treat. It is also associated with less than satisfactory functional results inspite of progress made in orthopaedic techniques ^(1,2). Many methods of treatment were used, including traction, closed reduction, open reduction and internal fixation(ORIF) and arthroplasty^(3,4).

Since the method of treatment varies from essentially no ^(X) treatment to ORIF ^(4,5,6), the ORIF remain the main method of maintaining articular functions.

In some cases particularly with intra-articular comminution, anatomical restoration of the articular surface could not be achieved or maintained through manipulative reduction alone hazards of open reduction have argued that additional surgical trauma and the inherent difficulty in securely stabilizing the small intraarticular fragment will lead to added fibrosis and less satisfactory results ⁽⁷⁾.

Early ORIF by plates and screws with early motion decreases the joint stiffness and helps in restoration of joint functions⁽⁵⁾.

REVIEW OF LITERATURE

REVIEW OF LITERATURE

ANATOMY

The elbow joint is a synovial joint of the hinge variety. It consists of two articulations:

systemic

↳ **a) Humero ulnar articulation: fig (1)**

Between the trochlea of the humerus and trochlear notch of the ulna.

b) Humero radial articulation : Fig. (1).

Between the capitulum of the humerus and the upper articular surface of the head of the radius.

The lower end of the humerus present articular and non articular portions . The articular part is divided by a groove into lateral convex surface called capitulum and medial surface called trochlea.

(1) The articular portion:

I. The capitulum:

The capitulum (latin for little head) is the smooth round knob situated on the lateral aspect of the lower end of the humerus. It presents anterior and inferior articular surfaces, but does not extend posteriorly. Its lateral border merges with the lateral epicondyle. The head of the radius rotates on its anterior surface when the elbow is in flexion and

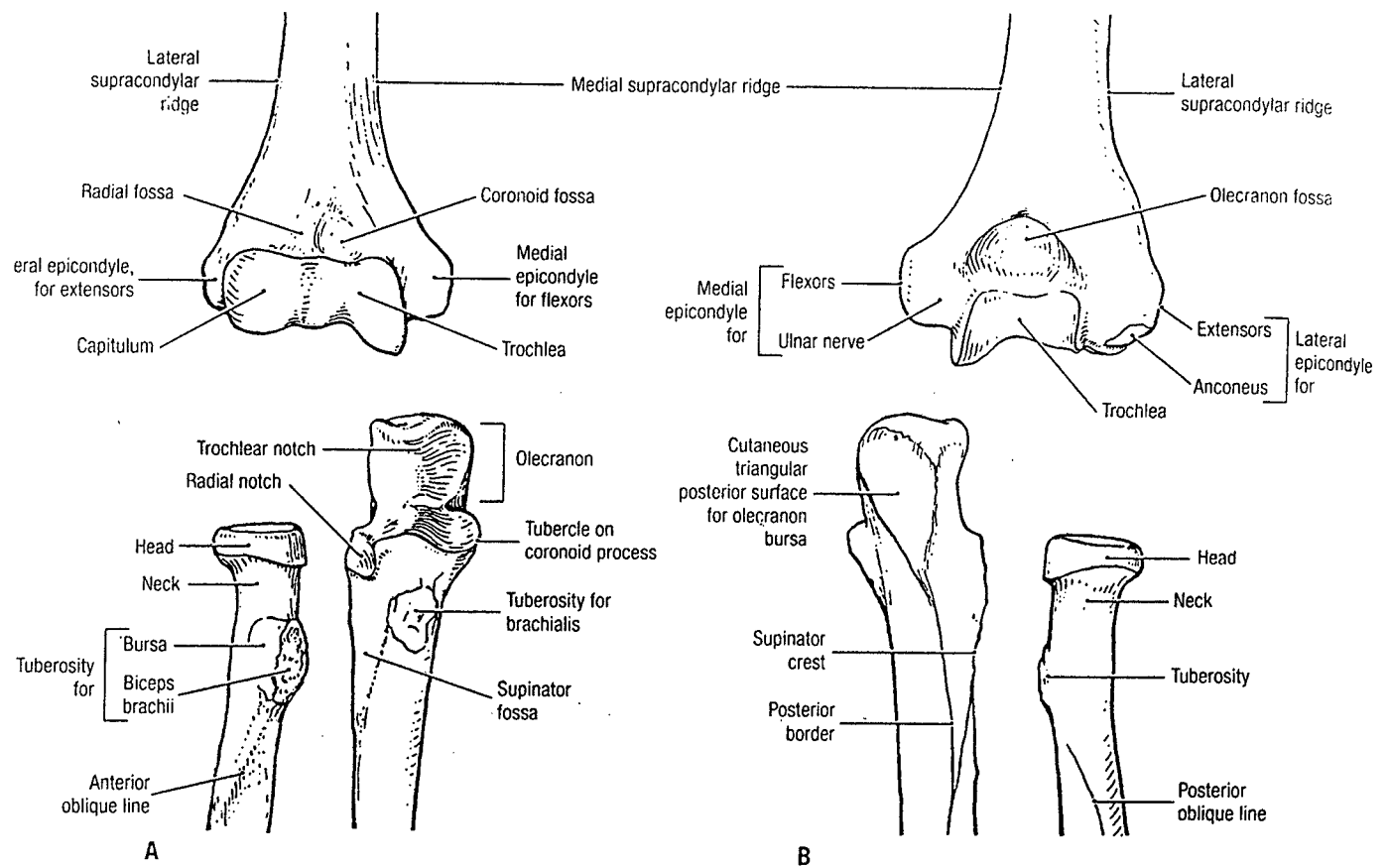


Fig. (1): Bones and imaging of elbow region ⁽⁸⁾

A) Anterior view

B) Posterior view

C) Radiograph of elbow joint,
anteroposterior view

can touch its inferior surface when the elbow is in extension. The radial fossa is the shallow depression on the front of the humerus immediately above the capitulum. The margin of the head of the radius closely approximates this fossa in full flexion⁽⁹⁾.

II. The trochlea:

The trochlea is a convex part covering the anterior, inferior and posterior surface of the lower end of the condyle of the humerus. Its medial part project downward beyond the rest of the bone. It articulates with the trochlear notch of the ulna.

In extension the inferior and posterior surfaces of the trochlea are in contact with the trochlear notch of the ulna. In flexion, the trochlear notch rolls on the trochlea leaving the posterior aspect exposed⁽⁹⁾.

(2) The non articular portion:

It includes the medial and lateral epicondyles, olecranon, coronoid process and radial fossa.

i) **The medial epicondyle;** It presents the medial projection on the medial portion of the condyle. The ulnar nerve *Fig. (2)* passes in a groove from the arm to the forearm on the posterior surface of the medial condyle and can be felt as a cord like structure and can be rolled against the bone. The lower part of the anterior surface gives origin to the superficial group of flexor muscle of the forearm (common flexor origin)⁽⁹⁾. *Fig. (3)*.