THE ELBOW

H.Myburgh

2012

Anatomy

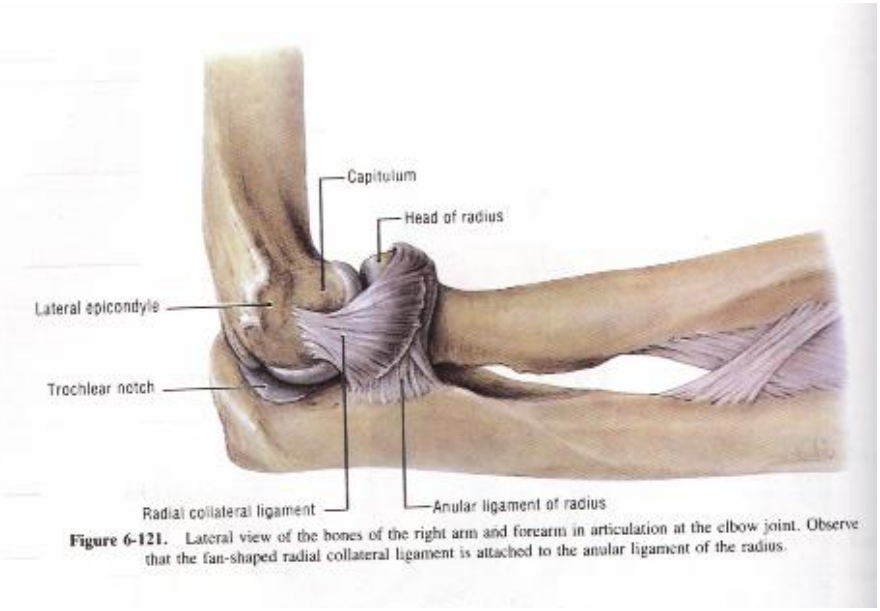


Figure 6-121. Lateral view of the bones of the right arm and forearm in articulation at the elbow joint. Observe that the fan-shaped radial collateral ligament is attached to the anular ligament of the radius.

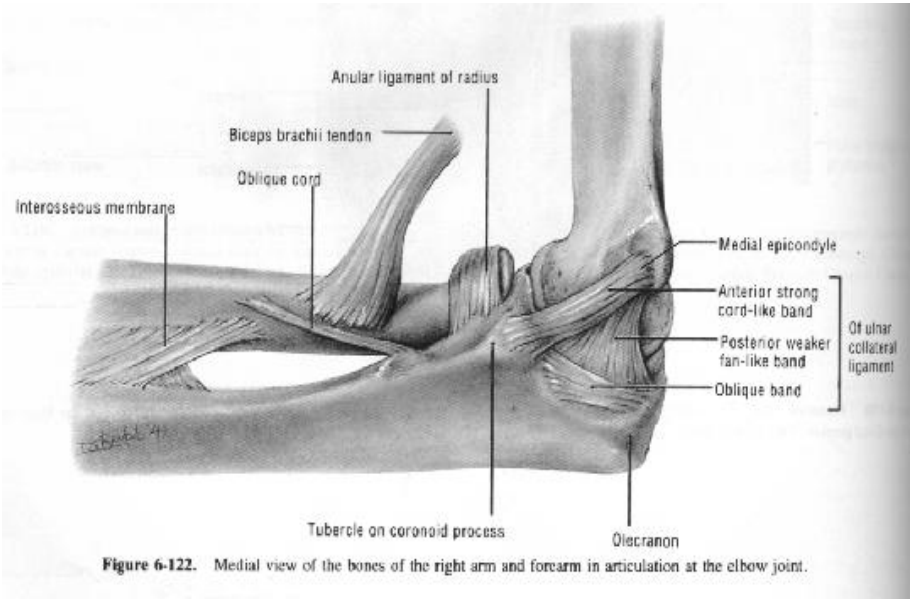
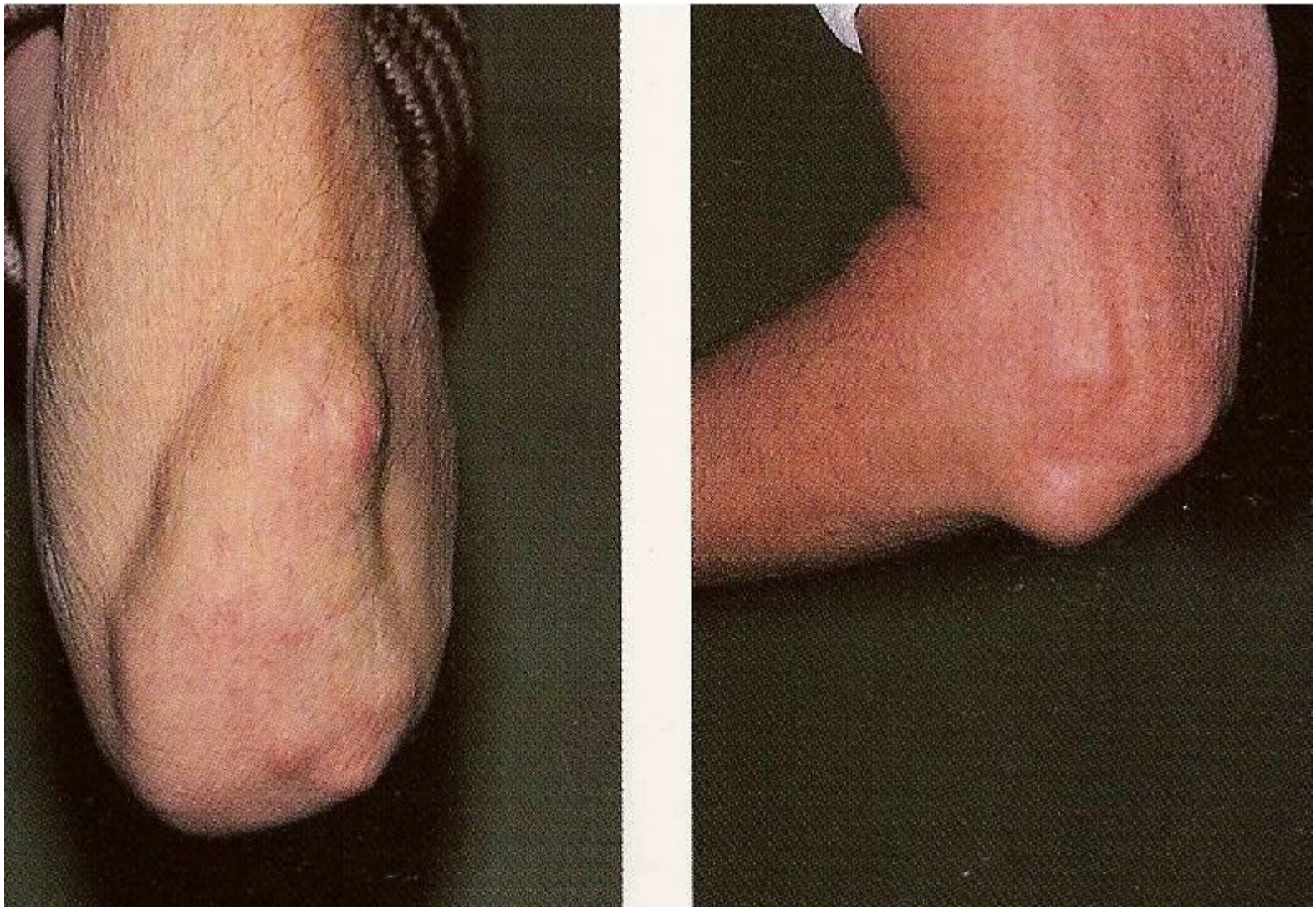


Figure 6-122. Medial view of the bones of the right arm and forearm in articulation at the elbow joint.

The Painful Elbow

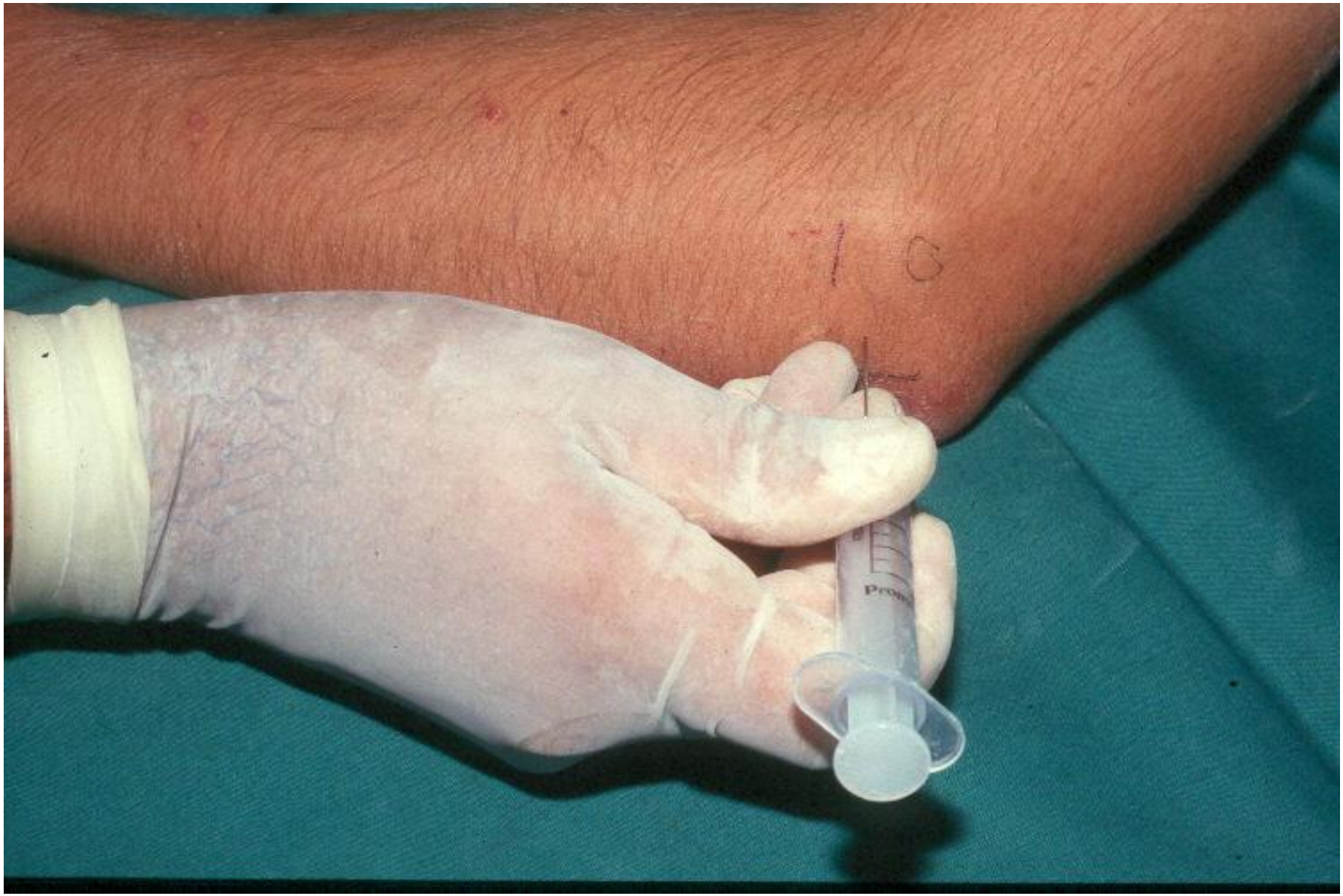
- Referred Pain: Cervical Spondylosis
- Joint Disorders: Rheumatoid Arthritis
  Gout + Pseudogout
  Osteoarthritis
- Periarticular Disorders:Olecranon Bursitis
  Lateral Epicondilitis
  Medial Epicondilitis
  Nerve Compression
  Tendinitis

Rheumatoid Nodules



Treatment RA

- Medication
- Infiltrations
- Splints
- Synovectomy+ debridemeny
- Total Elbow Replacement



Olecranon Bursitis

Overuse or Repetitive Strain Disorders

- Tennis Elbow
- Golfer's Elbow
- Distal Biceps Tendinitis
- Triceps Tendinitis

Pathogenesis

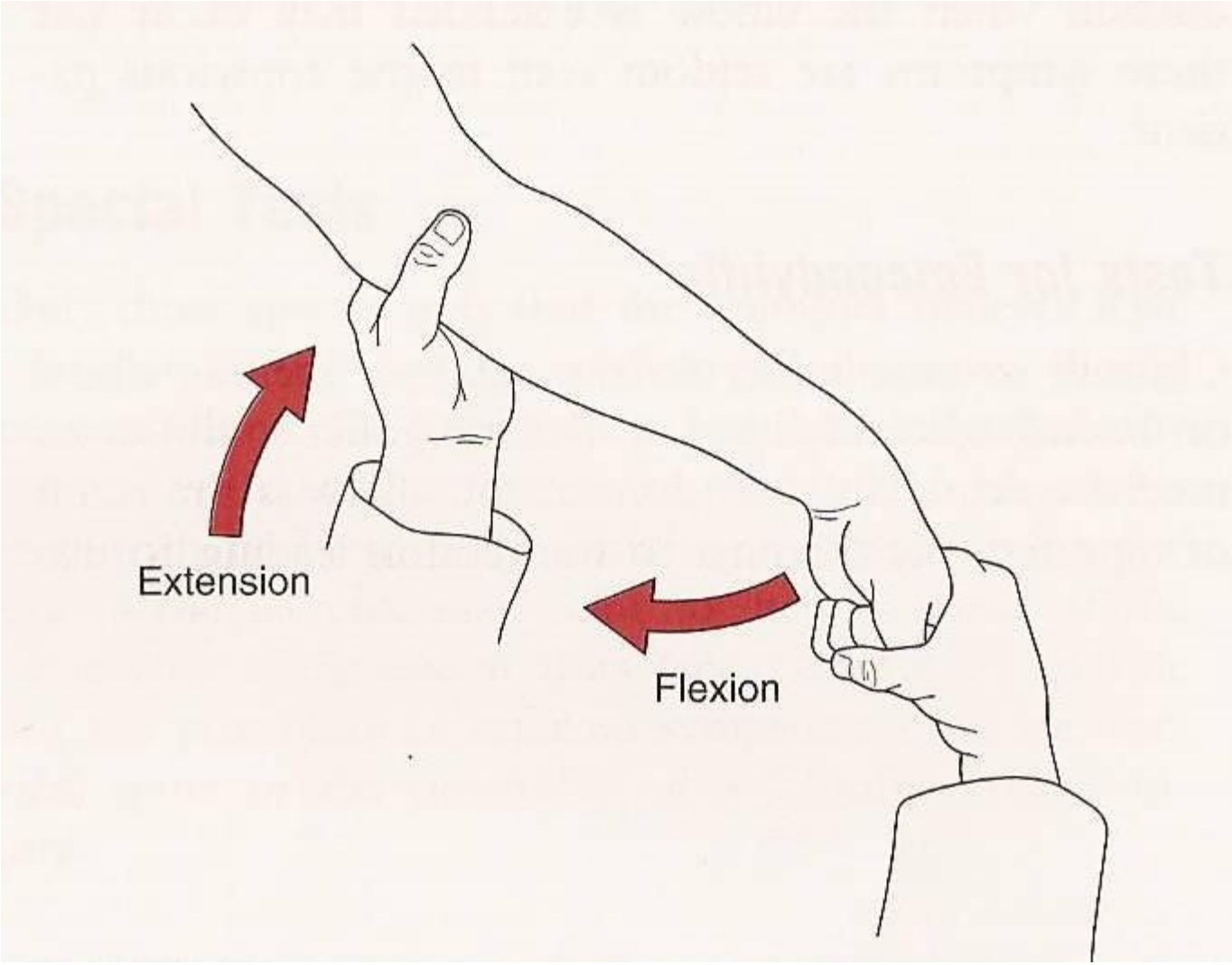
- Chronic overuse injuries are the result of multiple microtraumatic events that cause disruption of the internal structure of the tendon and degeneration of the cells and matrics , which fail to mature into normal tendon.

TENNIS ELBOW

- Symptoms:
  - Pain picking up objects.
  - Pain over lateral epicondyle

DIAGNOSIS

- Signs.
  - Local tenderness
  - Pain at extensor tendon origen with wrist extension against resistance.


Extension
Flexion

Differential Diagnosis.

- Radial nerve entrapment.
- Cervical Osteoarthrites.
- Intra-Articular Abnormalities and Joint-Laxity.

Control of Pain.

- Protection from abuse.
- Relative rest.
- Ice, Compression, Elevation.
- Medication and Passive modalities
- Injection of corticosteriods

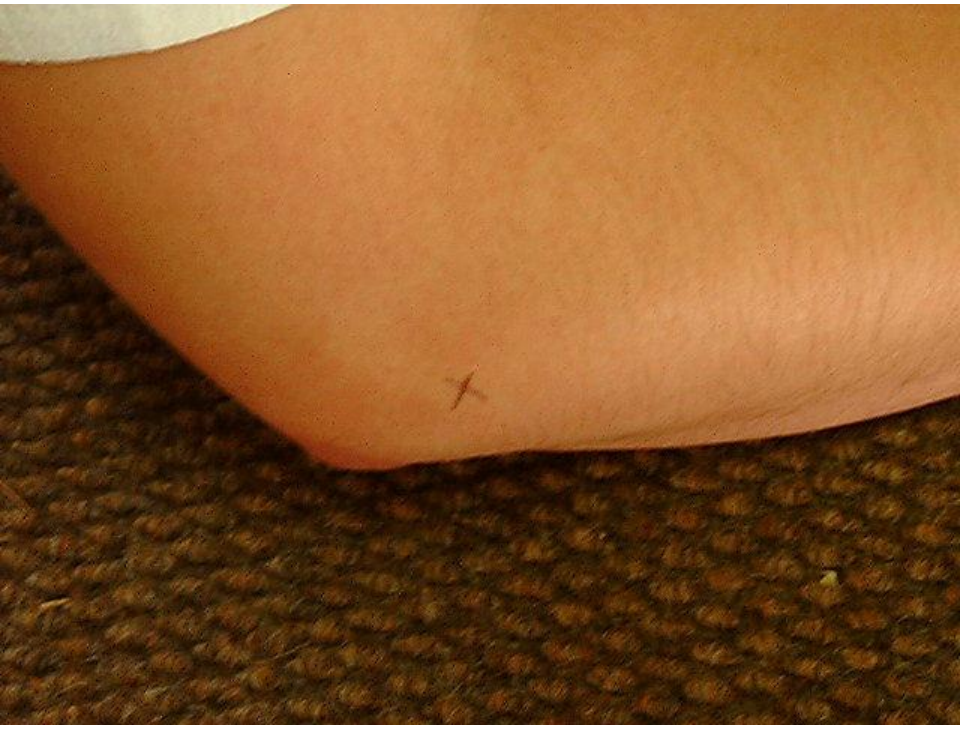
Tennis Elbow

- **Treatment**

❑ <u>Non-operative</u>

i. Rest, ice, brace, NSAIDS
ii. Steroid injections
iii. Physiotherapy/Rehab
iv. Extracorporeal Shock Wave Therapy
v. Radiotherapy
vi. Methods to “complete the lesion”

Cortisone Injection.



- 2.5ml Lignocain +1ml cortisone
- Not more than 3 times
- Not to superficial.

Operative Treatment.

- 5-10% of cases
- Handshake test.
- Goals of operative treatment:
    - Resect pathological material.
    - Stimilate neurovascularization
    - Create healthy scar.

Radial Tunnel Syndrome

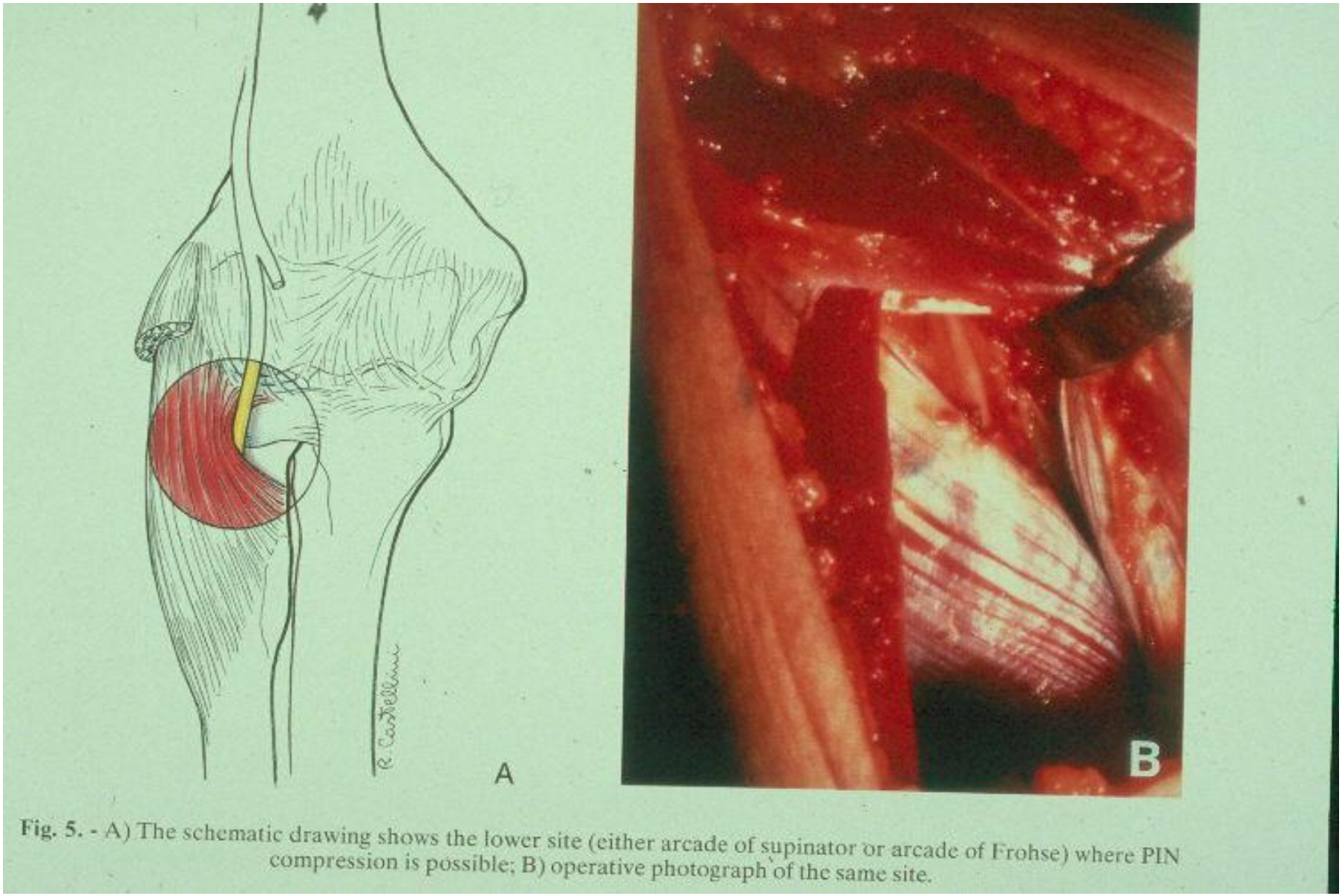


Fig. 5. - A) The schematic drawing shows the lower site (either arcade of supinator or arcade of Frohse) where PIN compression is possible; B) operative photograph of the same site.

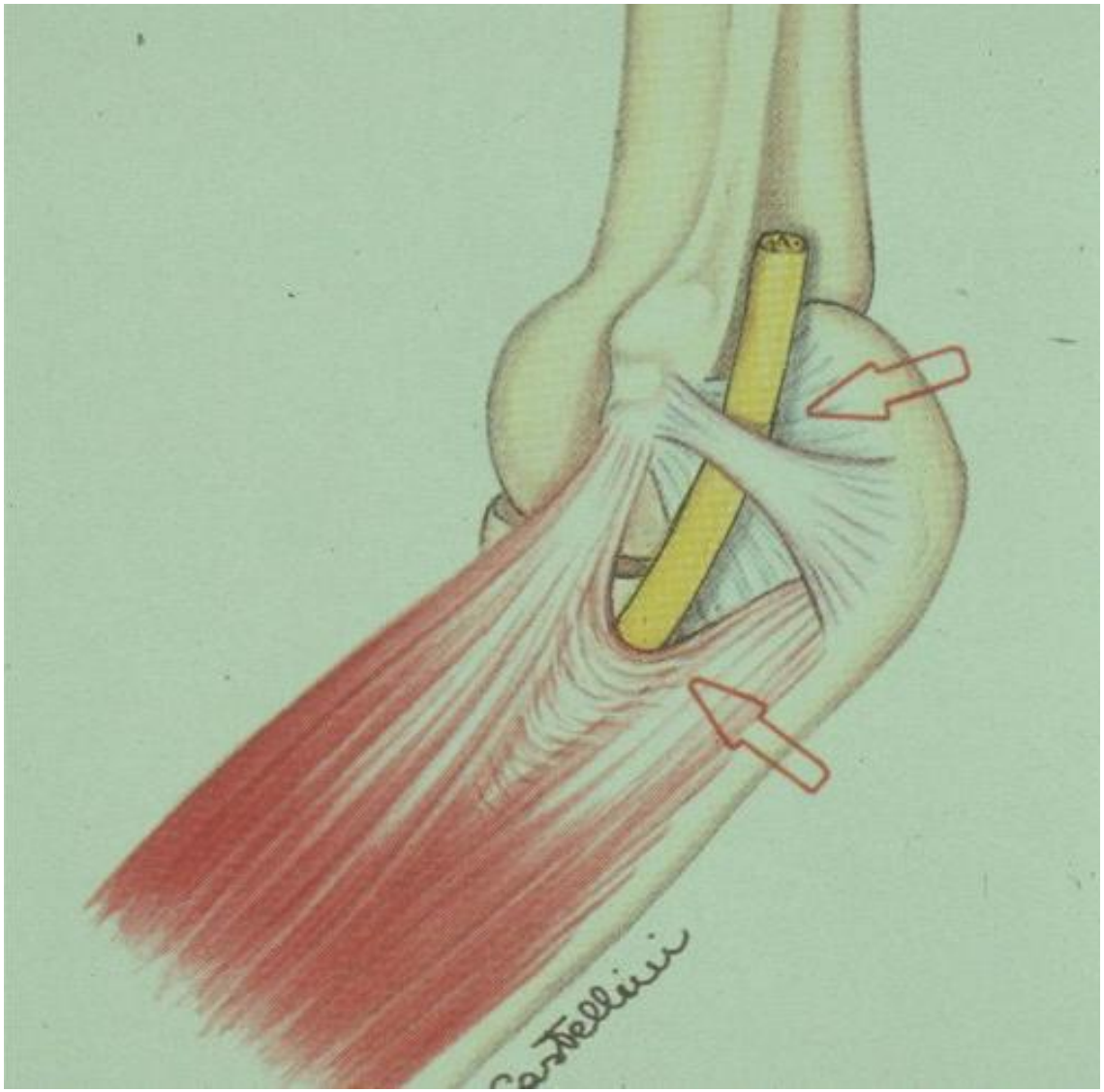
Medial Epicondylitis.

- Area of involvement: Interface between pronator teres and flexor carpi ulnaris.
- Diff. Diagnosis:
    - Ulnar nerve involvement-60% of cases.
    - Collateral ligament insufficiency.
    - Intra-articular pathology.
  - Surgical treatment less predictable.

Diagnosis Golfer's Elbow

- Tenderness over medial epicondial.
- Pain over medial epicondia with wrist flexion agianst resistance.

Ulnar Tunnel Syndrome



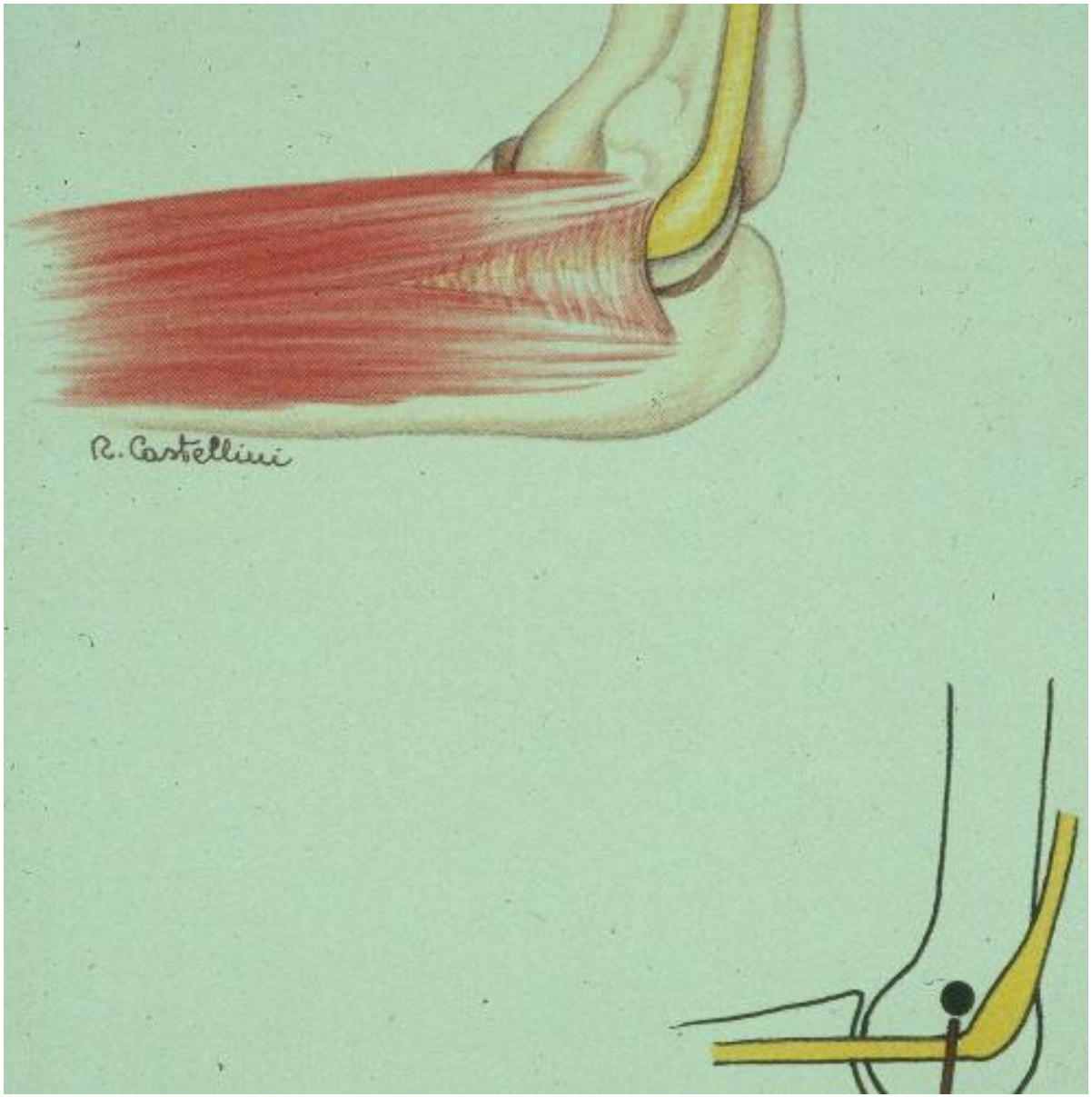
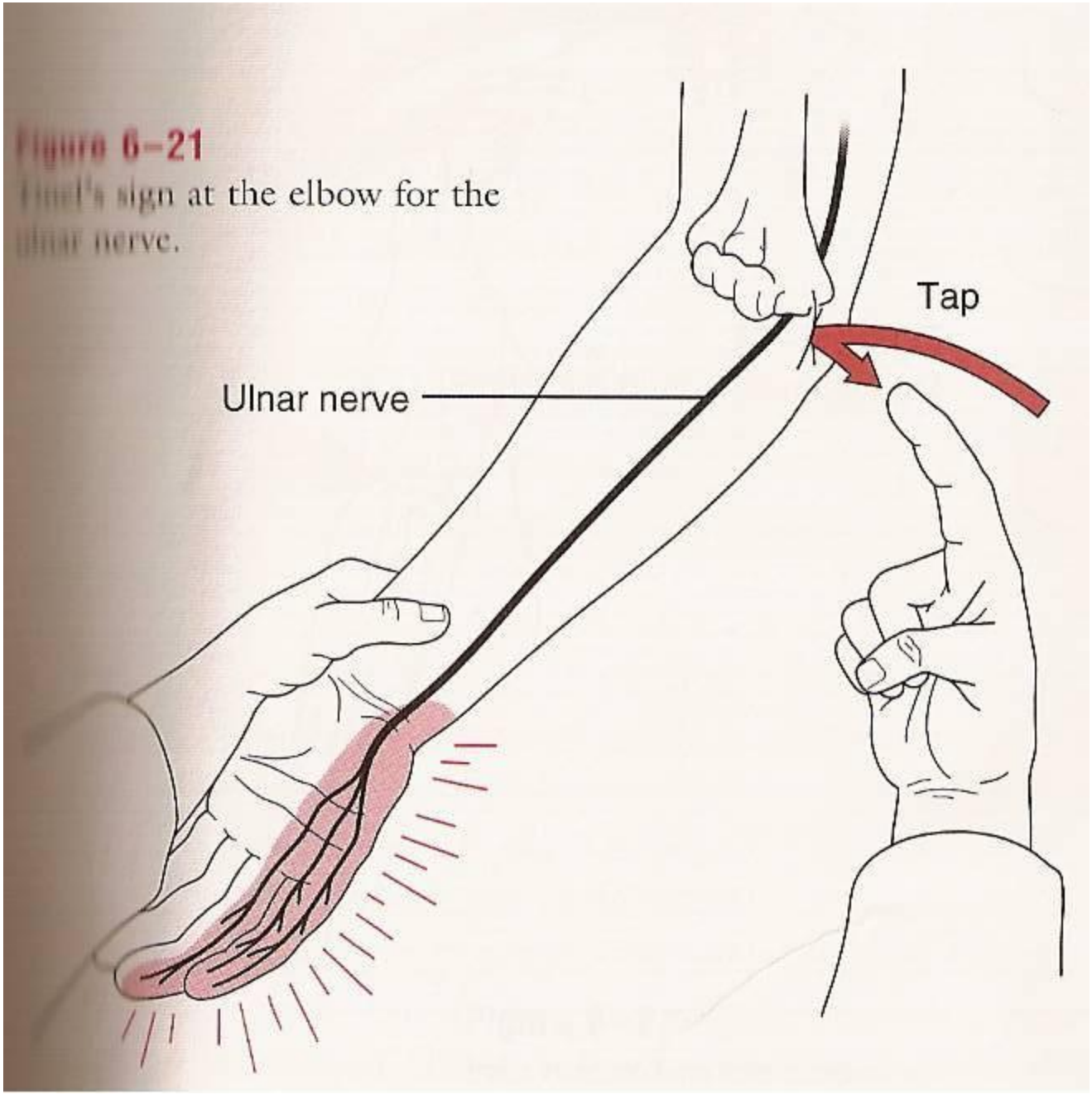
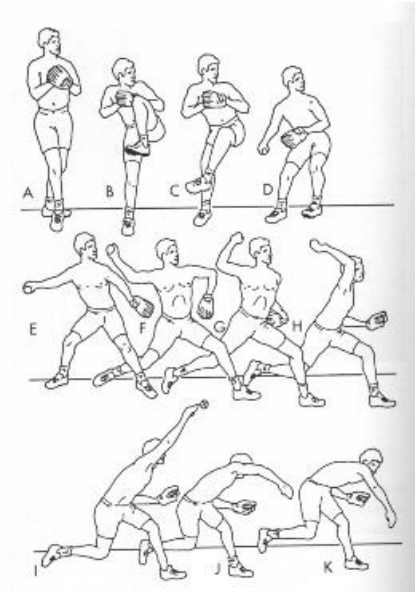

R. Castellini

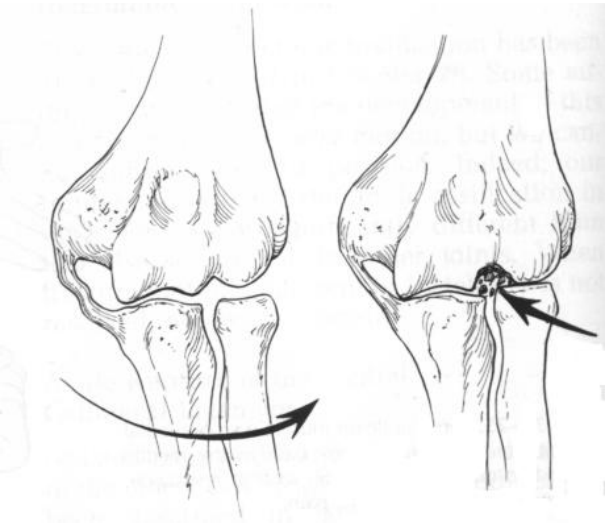
Figure 6–21
Tinel's sign at the elbow for the ulnar nerve.



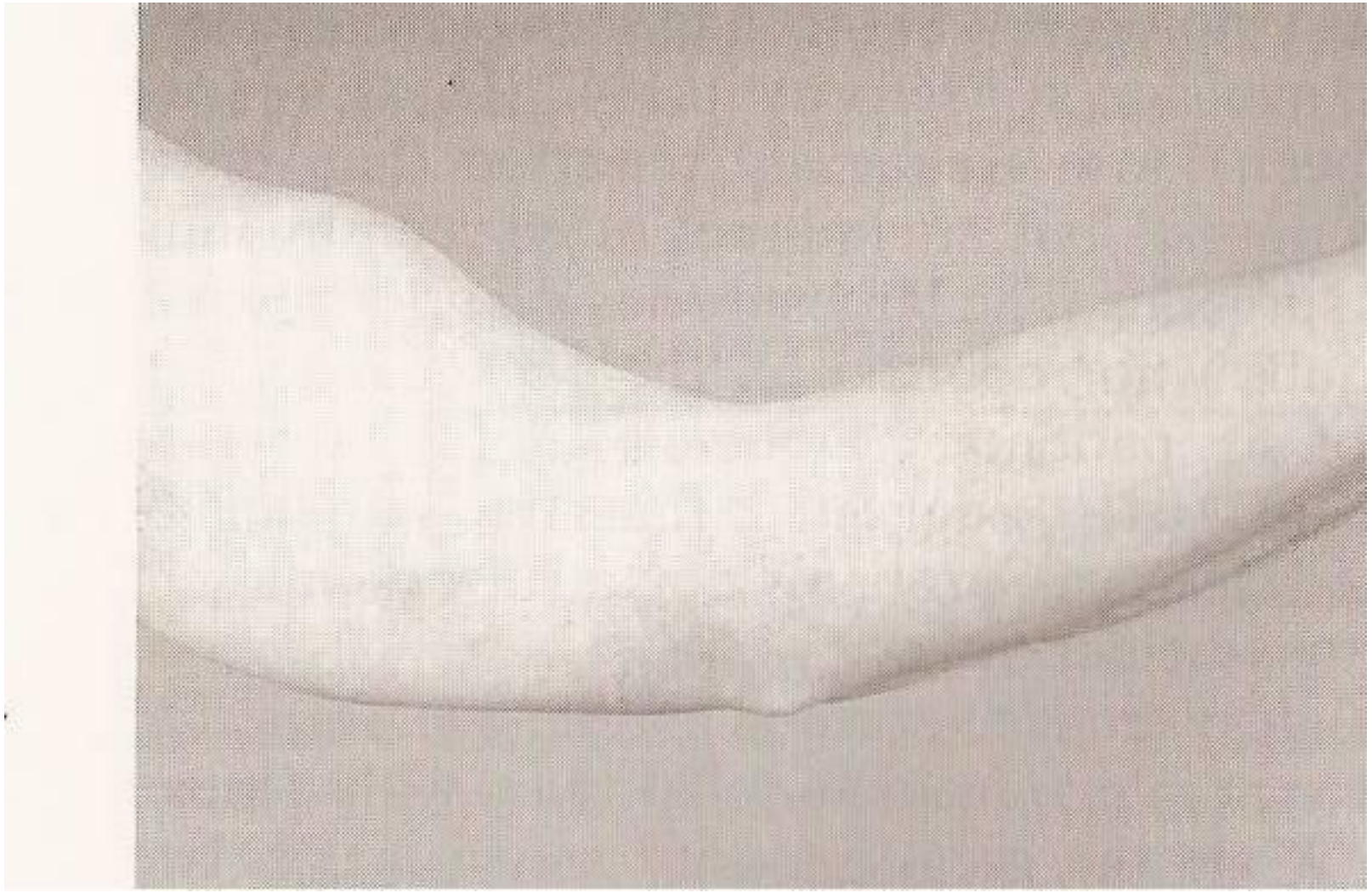
Overuse Injuries of the Elbow

- **<u>Chronic valgus insufficiency in adults</u>**
- Repetitive throwing
- Functional incompetency of the medial support →lateral joint compression + loose body formation
- Medial avulsion
- Surgery only for professional athletes

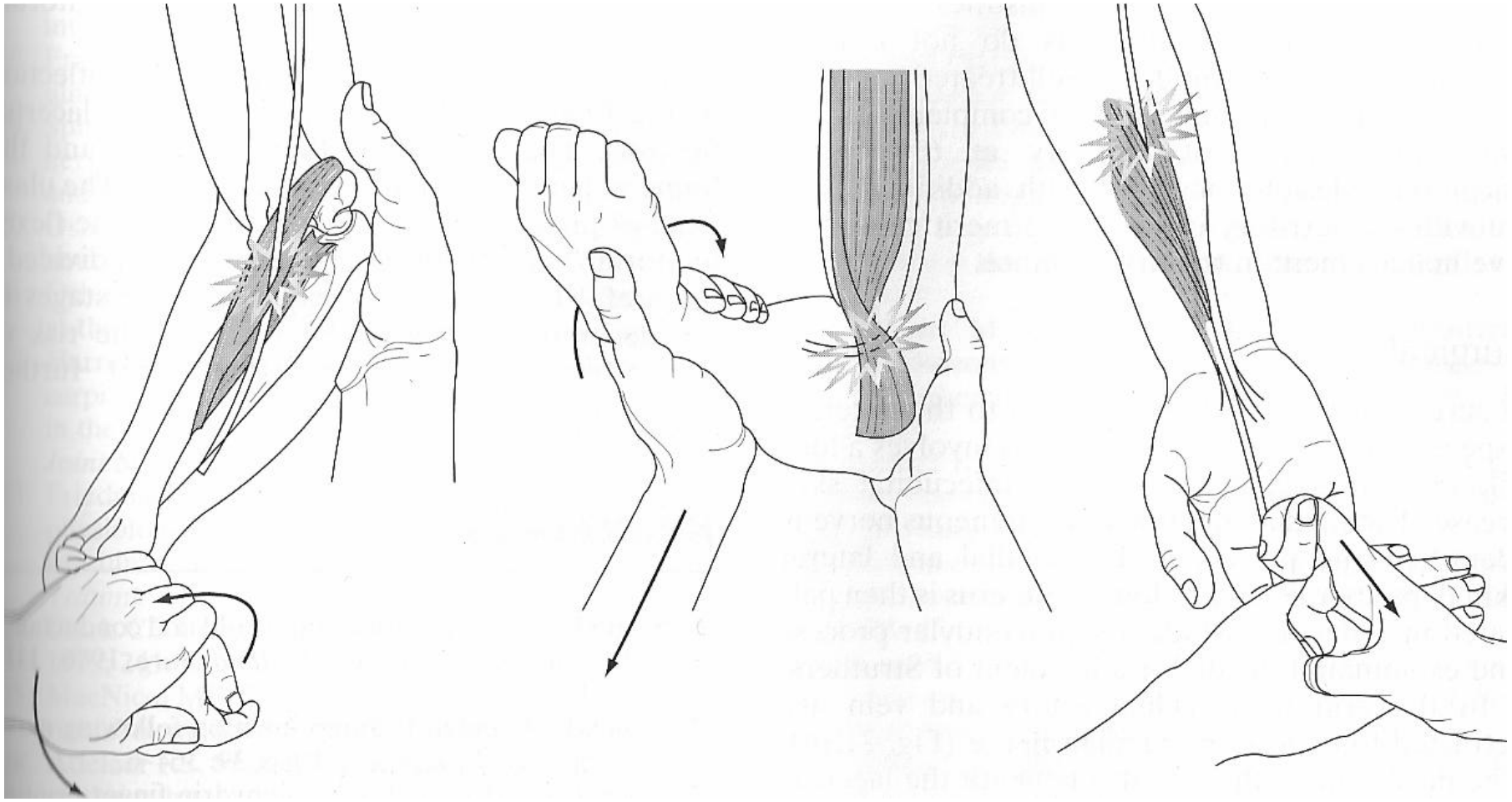




Distal Biceps Tendon Rupture



PRONATOR SYNDROME PROVOCATION TESTS



Median Nerve (AIN)

The Unstable Elbow

- Recurrent elbow instability
- History
- Clinical Examination:
- Lateral pivot shift maneuver/ Posterolateral Rotatory Drawer Test
- Varus test
- Apprehension test
- Pushup sign
- Chair sign

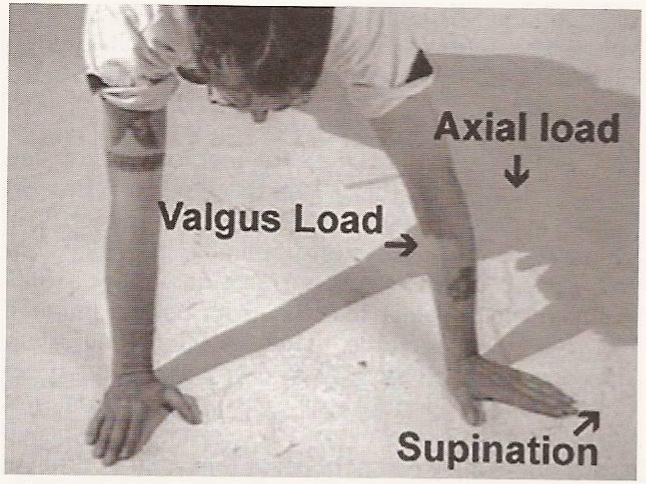


Figure 1 Pushup sign: upper extremities are positioned with elbow at 90° flexion, with forearms supinated and arms abducted to greater than shoulder width.

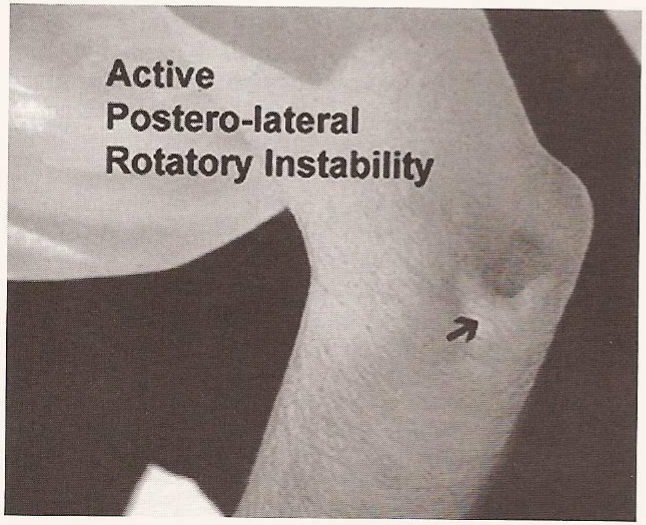


Figure 2 Positive pushup sign: apprehension or dislocation occurs on terminal extension of arm from flexed position.

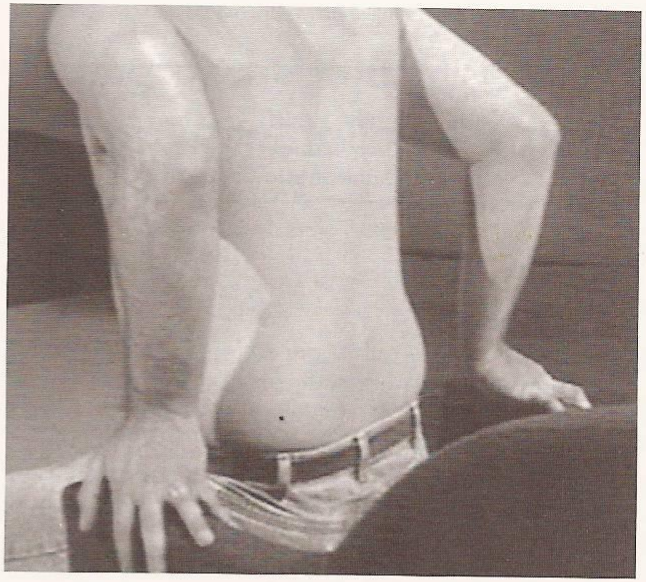
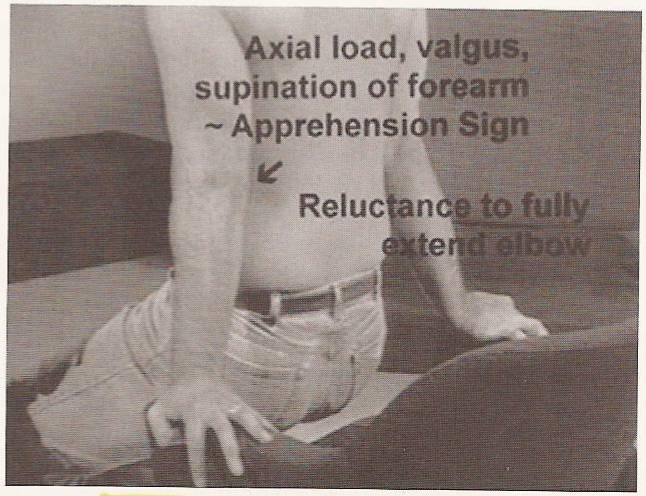
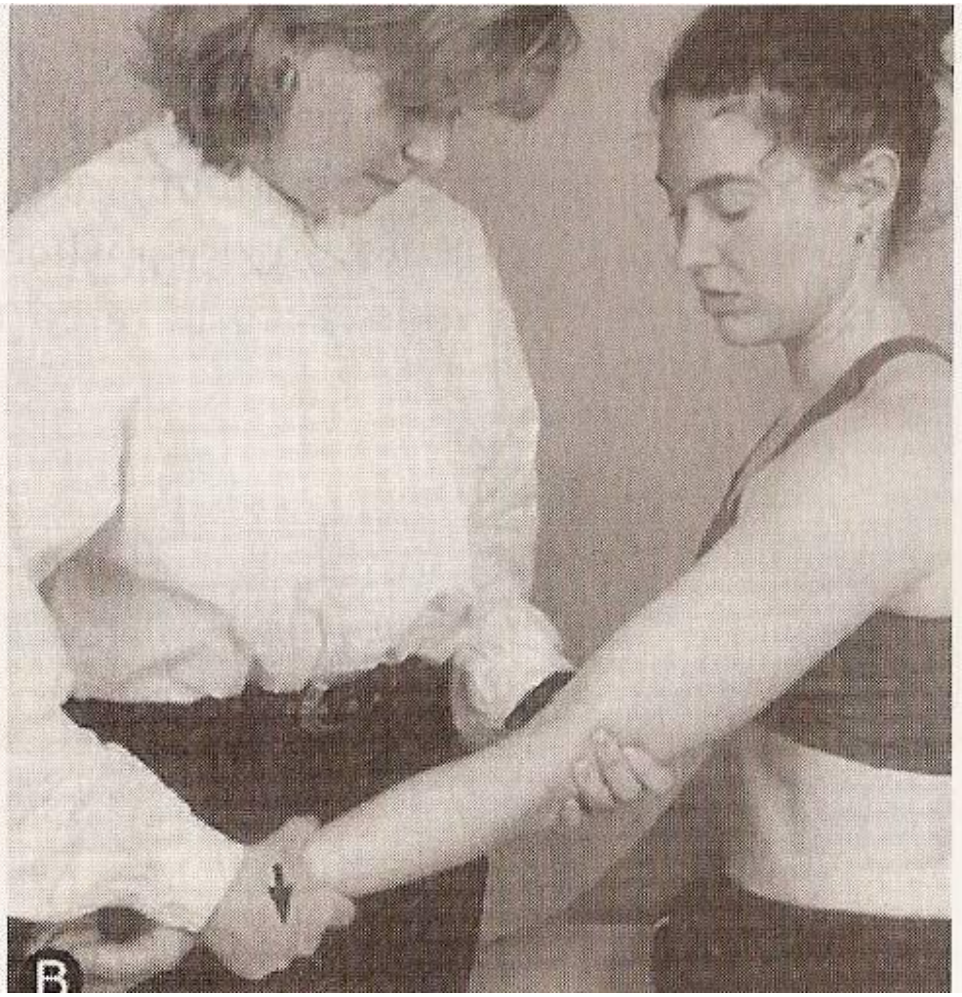


Figure 3 Chair sign: patient is in a seated position with elbows flexed 90°, forearms supinated, and arms abducted to greater than shoulder width.

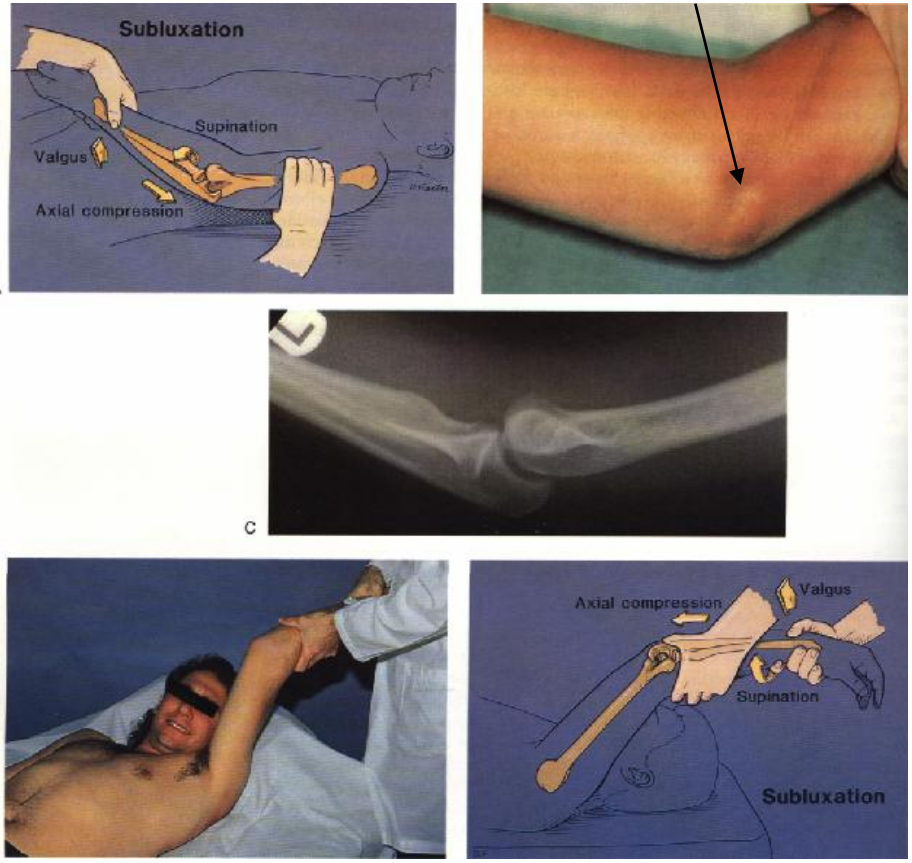


Varus Valgus Stability



The Unstable Elbow

- Clinical Tests



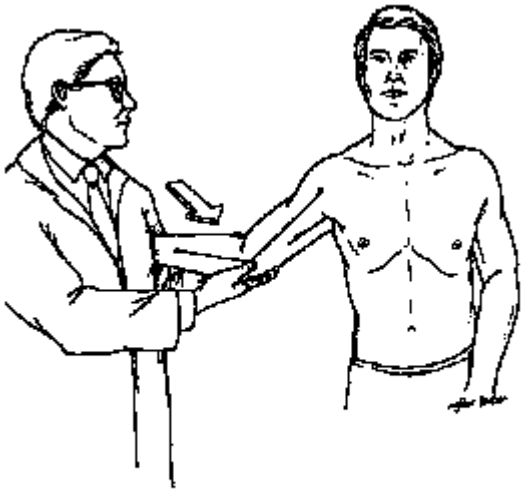


Fig. 6 Jobe technique for eliciting evidence of medial collateral ligament insufficiency.

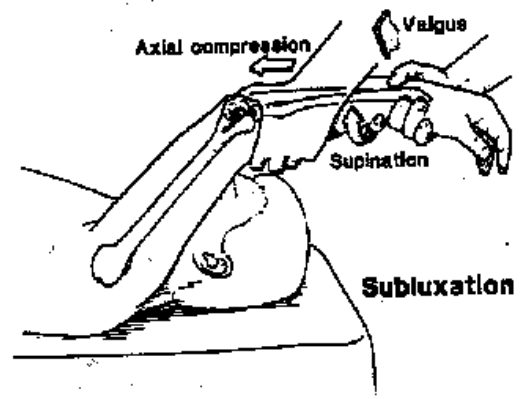


Fig. 5

Illustration showing the lateral pivot-shift test for posterolateral rotatory instability of the elbow, which is performed with the patient's arm supinated. A supination-valgus moment is applied during flexion, rotating the elbow on subluxation anatomically at about 40 degrees of flexion. Additional flexion causes reduction (with a palpable, visible clunk, if successful). This test creates apprehension in the patient, who senses the sensation that the elbow is about to dislocate.

THANK YOU