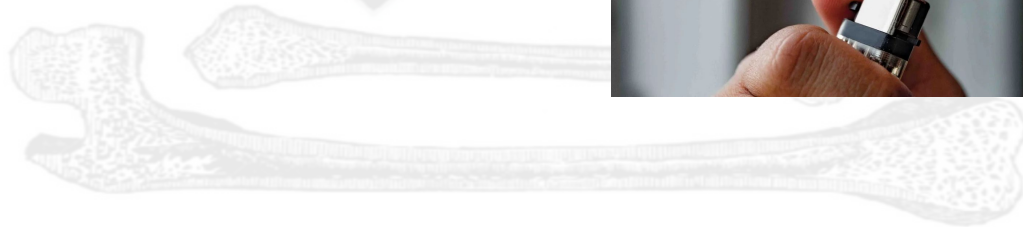

Distal Biceps Tendon Injuries

w/ Dr. Ilyas



Epidemiology

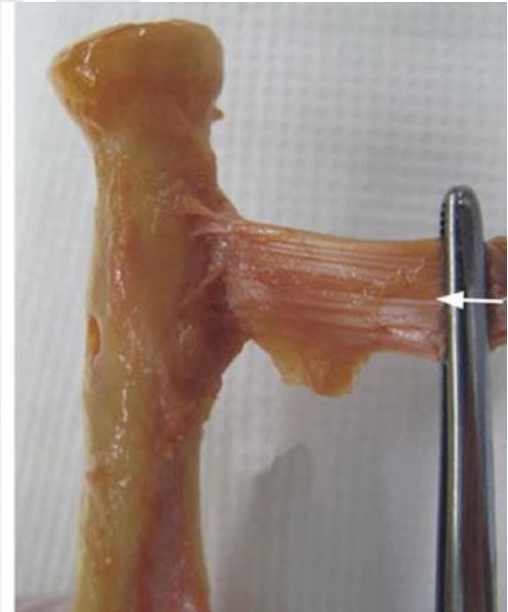
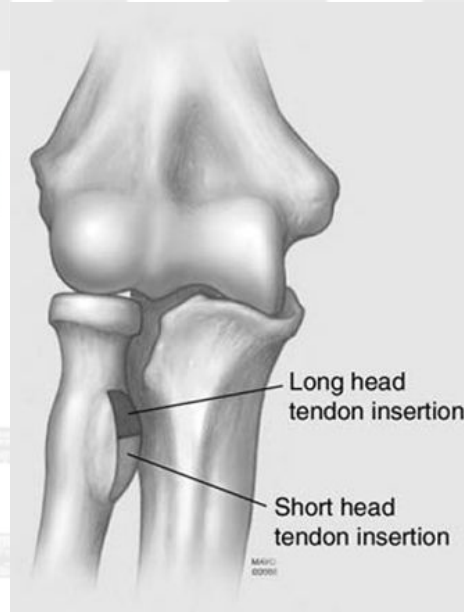
- Dominant extremity of middle aged men
- Possible associated w/ steroids, smoking, obesity



NATIONAL

Anatomy

- Short + long head of biceps have two insertions on radial tuberosity
 - Tendon rotate 90deg, short head inserts distal (elbow flex)
 - Long head (elbow supination)
- Lacterus fibrosus originates from distal end of short head biceps > blends w/ fascia of ulnar aspect of arm



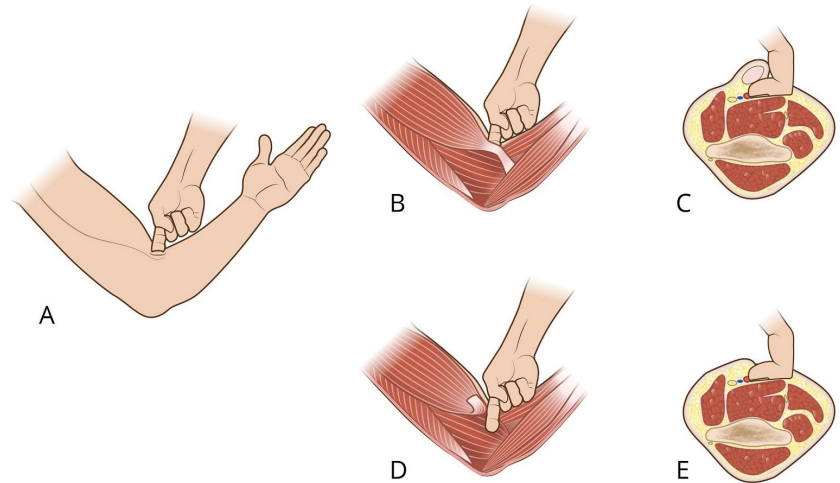
Mechanism

- Eccentric load to biceps
- Distal biceps tendon is hypovascular



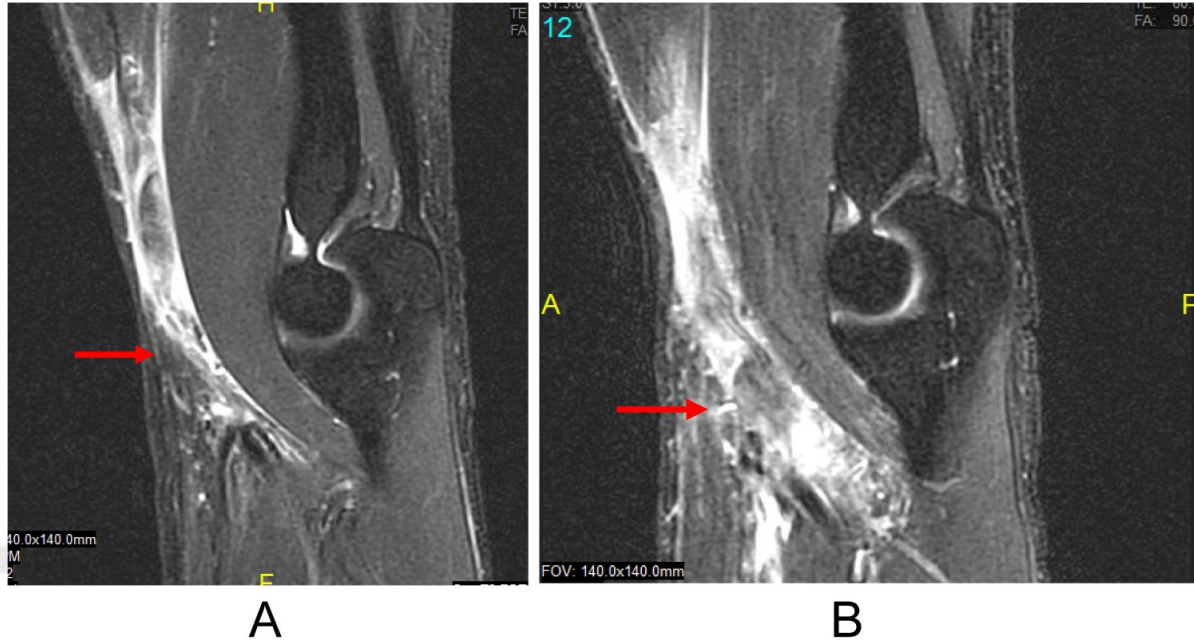
Evaluation/ PE

- History: pop, pain, ecchymosis
- Physical:
 - Swelling, + hook test (if lacterus is disrupted- retraction of tendon into arm), weakness of supination



Imaging

- Xray, ultrasound, MRI



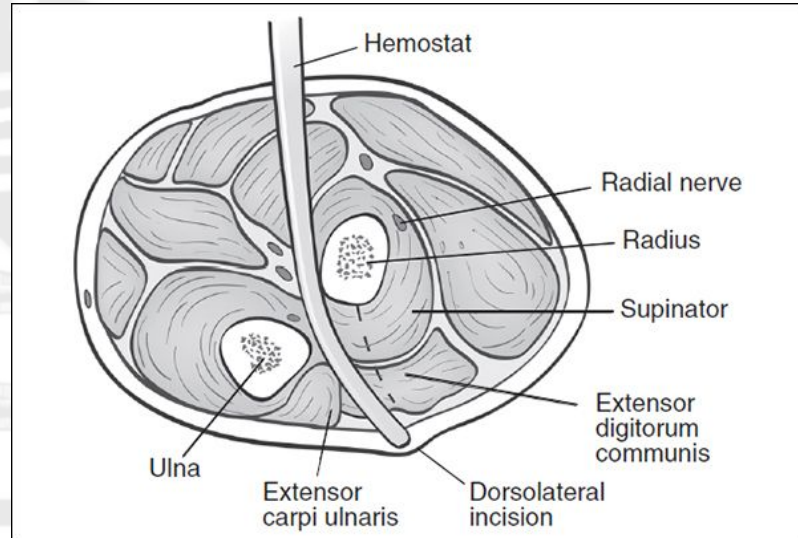
Treatment

- Non-op:
 - Low demand patients, non dominant arm, medical comorbidities
 - Loss of supination strength > flexion
- Operative tx:
 - Distal biceps tendon rupture



Surgical Options: Approaches

- Anterior single incision
 - Horizontal (at elbow crease, 3cm distal to elbow crease)
 - Vertical
- Dual incision

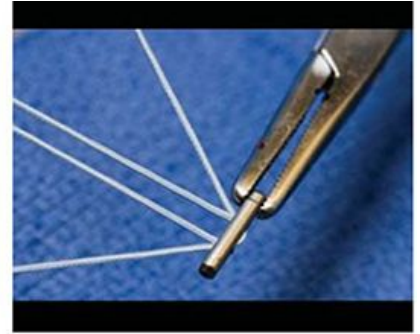


Fixation options

- Suture through drill holes
- Suture anchors
- Buttons
 - Intra osseous
 - Extra osseous
- Interference screw
- Similar clinical results with all



A



B



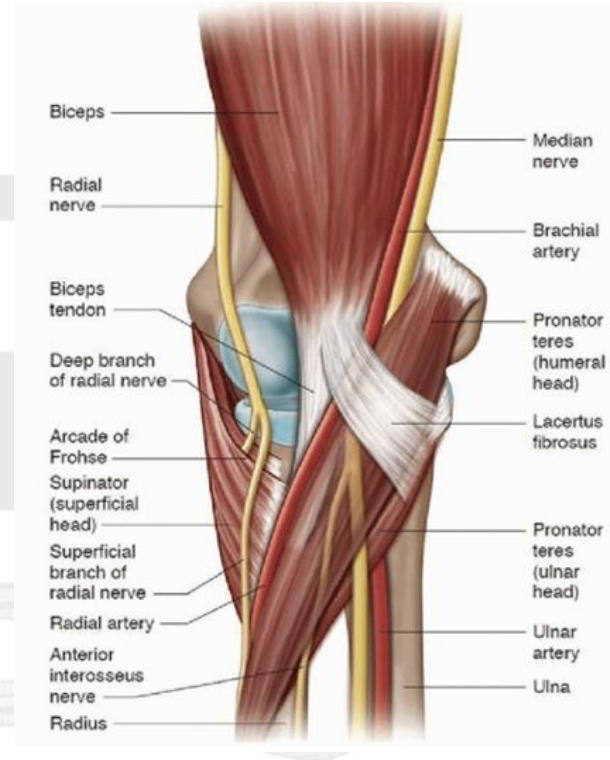
C



D

Surgical technique

- Muscle interval between BR and PT
- Injury to LABCN is common
- Use of army navy instead of retractors around radial side-
dec injury to PIN
- Position tendon as ulnar as possible to help w/
supination strength (i.e place
screw more radial)



JOMI Technique video

2. Incision

3. Superficial Dissection to Antebrachial Fascia

4. Identification and Mobilization of Distal Biceps Tendon Stump

5. Preparation of Tendon Stump

6. Preparation of Proximal Radius Insertion Site

7. Tenodesis Tendon Repair

8. Remarks on Closure and Splint

7 Tenodesis Tendon Repair

i Tie Two Ends Together to Lock Distal Biceps Tendon in Bone Tunnel

Accelerated Sequence

8:54

REQUIRES SUBSCRIPTION

Leave

Biceps Tenodesis for Distal Biceps Tendon Repair 1018 views

Harish S. Appiakannan, BS¹; Amir R. Kachooei, MD, PhD²; Asif M. Ilyas, MD, MBA, FACS^{1,2}

Outcomes

- Most get back to sport
- 90% supination strength achieved
 - Loss of supination- anterior placement of tendon, fatty infiltration of supinator muscle, decrease in radial tuberosity height



Chronic tears (>2 mo)

- Typically direct repair still possible , elbow may need to be flexed to 90 deg
- Allograft reconstruction may be needed if
 - Poor quality tendon
 - Inability to do primary repair w/ <70 deg flexion, tendon length <4cm



Post-op protocol?

NAILED



Thank you Dr. Ilyas!

- Resources:
 - AAOS ROCK

