Arthroscopy for Lateral Epicondylitis

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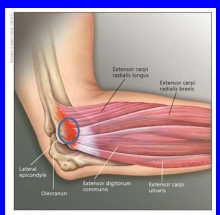
Disclosures

- Reviewer Arthroscopy, JBJS, Orthopedics, Sports Health
- Editorial Board Orthopedics Today
- Editorial Board Orthopedics
- Editor Ortho Hyperguide Slack
- Board of Directors Eastern Ortho. Assoc., AANA
- Book Royalties Springer

Lateral Epicondylitis

- Tennis elbow
- Tendinosis, degeneration of ECRB (EDC)
- Age related



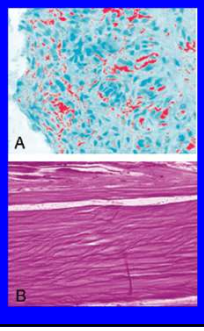
Tendinosis – Reflection of Vascularity

Associated with….
- cholesterol (Abboud)
- hypertension (Holmes)
- hyperglycemia (Bedi)
- fluoroquinolones (Van der Linden)

Overuse

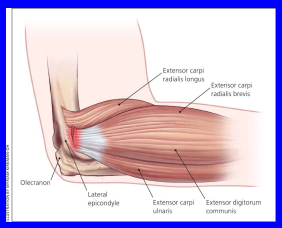
Tendinosis

- Poor vascularity = incomplete repair
- Nirschl – 'angiofibroblastic hyperplasia'



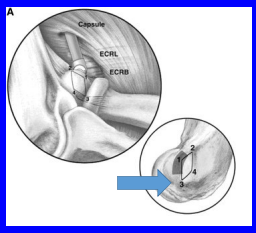
Location

- ECRB > 95%
- EDC superior 10-20% up to 1/3 cases
  Synovitis approx, 25%



Anatomy

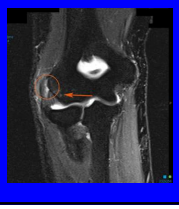
ECRB origin:
- **Deep to muscular ECRL**
- **Conjoined w/ EDC**
- **LUCL: posterior to ECRB,**
  Below EDC, blends c Capsule



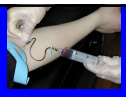
Lattermann

Imaging?????

- **Radiogra usuall sour, OA**
- **MRI: ?i demonstrate partial tears, other pathology,**
- **CT: helpful**
- **Ultraso**
- **Bone sca**



Non Op Rx



- ***Pt Education:**
- **Activity modification**
- **Supinated lifting**
- **Braces, splints**
- **Cortisone injection….**
- **ECSWT**

- ***Prolotherapy***
- **PRP…**
- **Accupuncture**
- **Botox ?**

- **Eccentric strength training**

Cortisone: Meta Analysis Ring

- 'no difference in pain intensity between corticosteroid injection and placebo 6 months…….. corticosteroid injections are neither meaningfully palliative nor disease modifying……'

Biologics DATA Still Unclear

- PRP, whole blood, 'needling'
  Expensive

- Raeissadat - PRP > whole blood
- Mishra – PRP > needling alone
- Chaudhury – PRP increases tendon vascularity
- Krogh – PRP no better than Saline

David Ring

- Literature is poor on Rx….
- MRI tear ECRB origin no ~ symptoms
- Disability (DASH) correlated with ***depression***
- Dexamethasone injection no effect

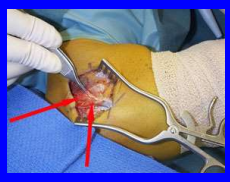
Ring, David. "Natural History and Common Misconceptions: Treatment with Education and Empathy." *Tennis Elbow*.

- 'Lasts about a year and leaves no trace'
- No real way to change course of disease
- Disease arises in middle age 'for no rhyme or reason'

Don't drink the Kool Aid Surgery RARE!!

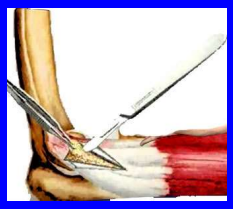
Surgery

- If your surgeon doing '100' releases a year, **beware**
- *Sometimes* truly necessary



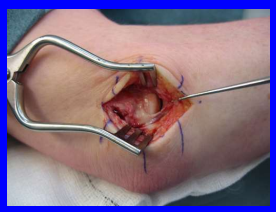
Indications Surgery

- **At least 4-6 mo. non op rx**
- **Severe sx**
- **<8% patients (at most!!!)**



Surgical Options

- Open
- Scope
- Percutaneous

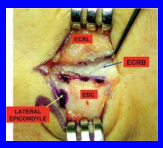


Which to choose?

- **Surgeon preference**
- **Goal: Excise or at least release the *bad stuff* !**
- **Studies *generally* no difference (Pearl, Szabo)**
- **Earlier RTW & pain relief w/ arthroscopy**

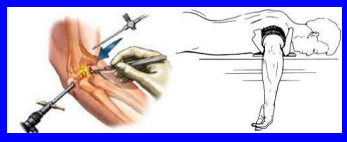
Open debridement

- Pain
- Morbidity
- Does not address intra articular injury
- Pathology is deep……..

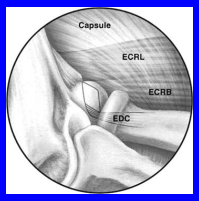


Scope is Best

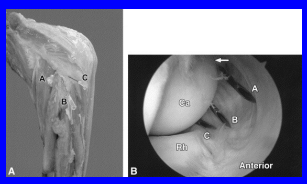
- Tendinosis of ECRB is DEEP, approach it deep
- Addresses pathology *precisely*, minimal morbidity
- Treats associated pathology
  - synovitis
  - plica



ECRB Anatomy Readily Accessible SCOPE



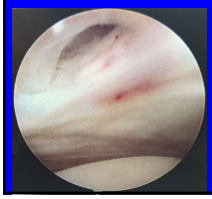
Lattermann

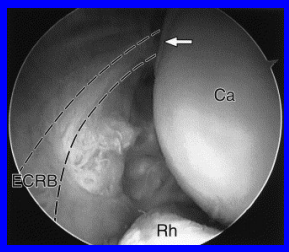


Smith

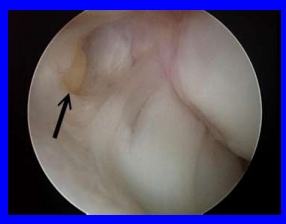
See it well!!!!!! Even Better with 70 degree

Smith





Capsular Rent

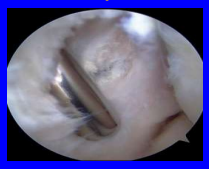


Greco

Debridement Alone May Suffice

- **Arthroscopic Treatment of Lateral Epicondylitis: Tenotomy Versus Debridement** Solheim

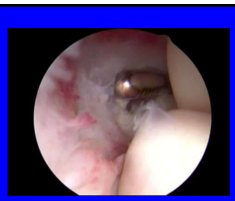
Debridement as good as tenotomy with shorter 'sick time'



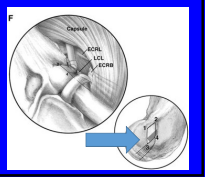
Pearls Scope:

- Prone
- Proximal Medial Viewing Portal
- Proximal Lateral Working Portal
- Distractor???
- 70 degree scope

Technique

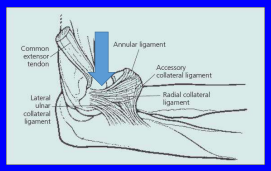


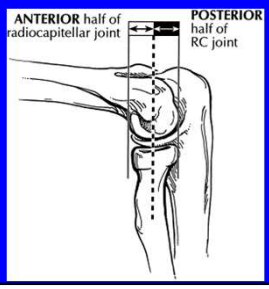
- Stay above mid portion capitellum
- Identify, release, debride
- **Resect above the capitellum until ECRL seen**
- **Debride to the EDC ridge and fibrous origin….**



Stay anterior to equator capitellum

- NO DAMAGE LCL





Smith

Decisive Portal Creation

Exposure Tendon

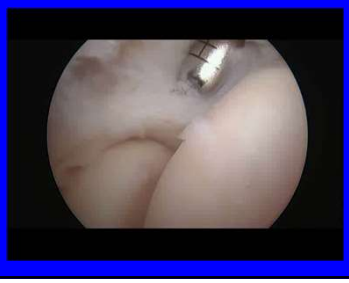
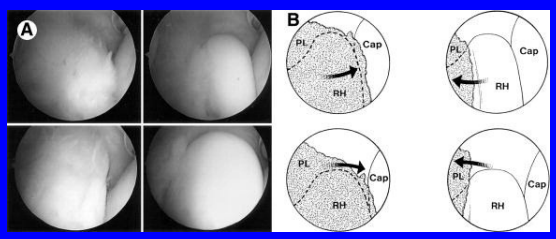


Fig. 1

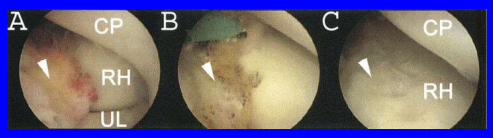
Treat Associated Pathology

- O'Driscoll Hypertrophic Synovial Fold RC Joint



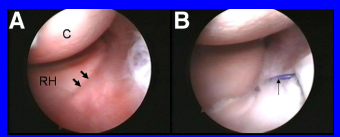
The posterolateral plica: A cause of refractory lateral elbow pain

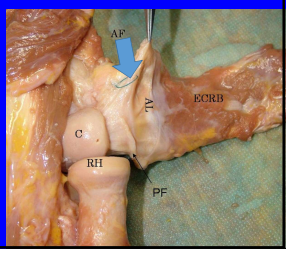
Ruch et al 2006



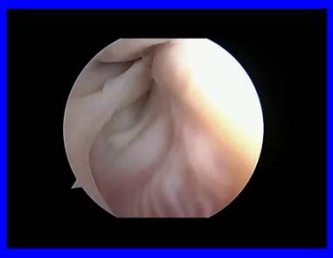
Tsugi Arthroscopy 2007

- Lateral synovial fold part of ECRB enthesis
- Can be inflamed with tendinosis ECRB





Anconeus Portals Resect Plica



Evidence

- **Arthroscopic Versus Open Tennis Elbow Release: 3- to 6-Year Results of a Case-Control Series of 305 Elbows. Solheim**
  - Scope had better DASH scores
- **Arthroscopic versus percutaneous release of common extensor origin for treatment of chronic tennis elbow. Othman**
  - Scope better DASH and VAS scores

No Further Questions Your Honor

Best treatment – NO BRAINER (ANYBODY HOME??????)

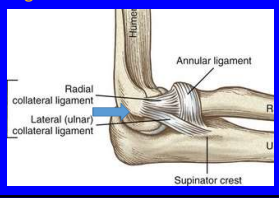
Failure

- **Inadequate resection (Nirschl)**
- **Excessive resection**
- **LUCL, EDC injury**
- **Improper diagnosis: PLRI, PIN, Biceps, etc.**

- **Stiffness, smokers**

Iatrogenic LCL Injury

- Posterolateral instability secondary to LCL resection
- Pain with supination
- 'rising from a chair'



Bottom Line

- Go slow with aggressive treatment elbow tendinosis
- Many confounding factors
- Many ways to treat surgically
- Literature (and JDK) favors scope

  less pain
  precise release
  concomitant treatment associated path.

THANK YOU