Distal Biceps Repair

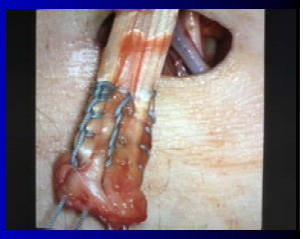
David Duckworth

Disclaimer

- Consultant for DJO

Distal Biceps Repairs

- Would be some of my happiest patients and most predictable in regards outcome.
- It is a good operation that works with minimal complications

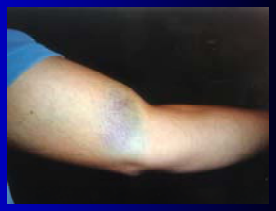


Distal Biceps Repairs

- Who to repair?
- How I do it?
- Repair options.
- Important aspects of the repair.
- Partial Thickness tears.
- Why not the 2 incision technique?
- Outcomes

Classic Patient

- 30 to 60 yo male
- Dominant arm
- Lifting injury/ forced flexion
- Sudden onset of acute pain
- Bruising in cubital fossa
- Weakness flexion and supination



Who Do I repair?

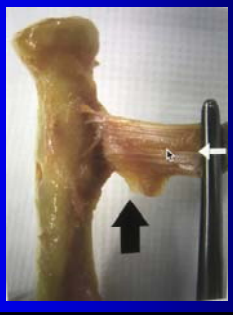
- Majority of patients with an acute injury
- Most patients want it repaired
- Left with weakness if left alone
- Hesitant to repair the chronic ones

- The hardest ones are the partial thickness tears!

Partial Thickness Distal Biceps Tears

- Can be difficult to diagnose and difficult to treat.
- Very similar history
- BUT the tendon feels intact clinically
- MRI is the most helpful investigation
- What do you do with a 40 - 50% tear?
- Rest, Physio, cortisone, Surgery??

You need to understand the Anatomy



Surgical Options

- One incision
- Endo button
- Suture anchors
- Interference screws

- Two incision (my preference)
- Transosseous tunnels

Endobutton and Screw

Literature

Single versus Double Incision Technique for Acute Distal Biceps Ruptures: A Randomized Clinical Trial

JBJS 2012 July, Grewal

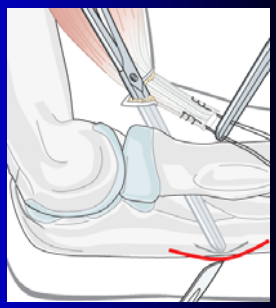
91 patients (47 one incis v 44 two incis)

No difference in outcome apart from 10% increase in flexion strength with 2 incision

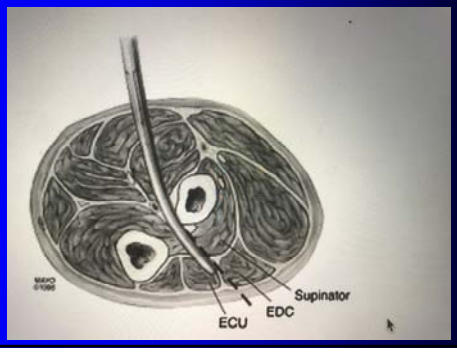
No higher complication rate

Increased partial LCNF palsy in one incision

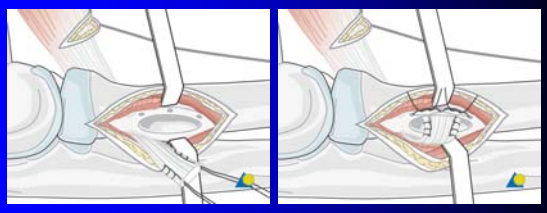
I prefer the Double incision technique

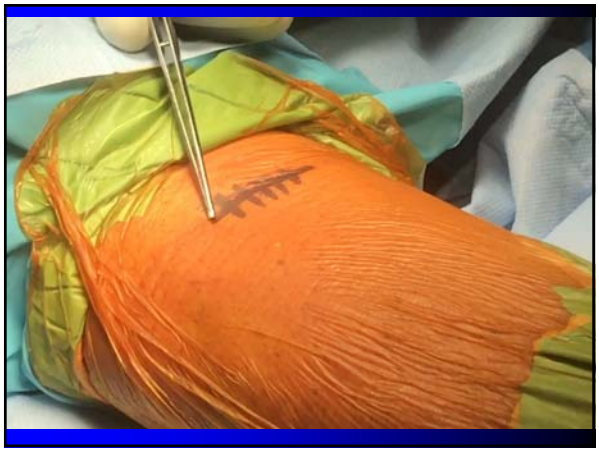


The path of the large Forcep



Repair on Posterolateral Side





Partial Thickness Distal Biceps Tears

- Treatment is generally Surgery
- You expose the distal tendon and it feels intact!
- There is often fluid around the insertion and you can often palpate distally a defect in the attachment
- How do you detach the tendon for a repair?
- Can be very hard through one small incision

Rehab

- Sling 6 weeks
- Active assisted Supination and Flexion
- Can lift a cup of coffee only
- Out of sling 6 weeks/ Full rom
- 8 weeks gradual strengthening
- Normal activities 4 to 6 months

Summary

- Distal Biceps surgery can be safely done through one or two incisions.
- Biomechanical studies show suture anchors, tenodesis screw, endobuttons are equivalent to transosseous tunnels
- Most allow early active assisted ROM
- Complications have equilibrated as Ectopic bone and nerve injury decrease

Distal Biceps Repair

- The method of surgical approach and method of tendon fixation should be dictated by surgeon experience and comfort!
- Importantly do what works for you!

Thank You!