Radial nerve tendon transfer case

Learning module
53 y/o female sustained multiple proximal dorsal forearm lacerations

- Injury occurred 8 months previously
- Presents with inability to extend wrist and digits at metacarpophalangeal joint

**Physical exam**
- Wounds healed with minimal scarring present
- Full PROM of wrist and digits
- 5/5 wrist extension with radial deviation, 0/5 MCP extension, no thumb retropulsion
- 5/5 pronation in elbow extension and elbow flexion
- 5/5 wrist flexion with palpable FCR and FCU
- 5/5 FDS and FDP all digits
- Intact palmaris longus
- Insensate over 1st dorsal webspace
Considerations: workup and treatment options

• Any role for EMG?
• Any role for exploration of proximal forearm?
• Any role for nerve repair, graft, or transfer?
• Tendon transfer options
  • Is a transfer for wrist extension needed?
  • Options for finger extension, thumb extension +/- thumb abduction?
Tendon transfers selected: FCR to EDC and PL to EPL
Approach to donor tendons: FCR and PL
Approach to recipient tendons: EPL and EDC
FCR and PL passed subcutaneously
Tendon transfers completed
Tension is assessed
Additional considerations

• Rehabilitation protocol?