IC32-L: Management of Extensor Tendon Deformity, Releases and Reconstruction

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Session Handouts

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...only fools and charlatans know everything and understand nothing.

Paraphrased from Anton Chekhov, (M.D.)

Don't confuse confident with correct...
Intrinsic Extensor Anatomy

- Terminal Tendon
- Lateral Bands
- Lumbrical & Interossei
- Triangular "Ligament"
- Oblique Retinacular "Ligament"
- Transverse Retinacular "Ligament"
- DIP Joint, PIP Joint, MCP Joint

Extrinsic Extensor Anatomy

- Central Slip
- Sagittal Bands
- Central Extensor (EDC + EIP/EDQ)
Flexible Swan Neck Procedures

- Central slip (Fowler) tenotomy
- PIP capsulodesis
- PIP FDS tenodesis
- DIP fusion +/- PIP soft tissue procedure
- Lateral band relocation
- Spiral oblique retinacular ligament reconstruction (SORL)
- Others……

SORL Reconstruction
Fixed Swan Neck Deformity

- Can try to convert to flexible if joint appropriate
- Therapy...therapy...therapy
- Manipulation
- Surgical releases
- Arthroplasties (unusual) or Arthrodeses if joint inappropriate
Boutonniere Deformity ("buttonhole")

- Therapy wait therapy wait…
- Set expectations
- PIP joint must be supple and without arthritic issues
- Start with dorsal exploration, extensor tenolysis, and evaluation of central slip/triangular & transverse retinacular ligaments
- Address central slip deficiency – multiple options; avoid grafting if possible; tight but not too tight!!
- Awake testing
- Relocate lateral bands dorsally – mobilize and secure
- Protect and mobilize post-op!!

Distal (Fowler) Extensor Tenotomy

Diagram showing the procedure of distal (Fowler) extensor tenotomy.
Surgical Releases for Posttraumatic Extensor Issues

Wait…wait……..wait……………..wait

 Make sure joint(s) and bones are appropriate for release (X-rays, exam)

 Consider MUA, otherwise extensor tenolysis first

 If still insufficient ROM, then joint capsulectomies

 If still insufficient ROM, then joint ligament releases

 If still insufficient ROM, try to determine reason, consider extensor lengthening (carefully!), etc.

In-Office Manipulation for PIP Extension Contracture
Extension Contracture Releases Post-op

- My preferences:
  - Awake testing
  - Immediate edema control as able
  - Long-acting anesthetic for early ROM
  - Home program immediately; formal therapy 3-5 days post-op
  - Nylon skin sutures
  - Give patients/therapists pictures
Free Functioning Muscle Transfer for Chronic Extensor Loss