TENDON TRANSFERS

Principles
Motivated patient
Full passive ROM
Adequate tissue bed
Gain in function
Sufficient excursion
Strength (power 4-5 MRC) Power = force x distance
Synergistic action
Straight line
One transfer for one function

Low Median
Deficit abduction & opposition
Many pts continue to have a functional thumb with FPB ('1/2 UN), adductor pollicis, FPL

Replacing APB
EIP to APB (re-route around the ulna)
FDS (ring) to APB (via FCU pulley)
ADM to APB (Huber)
Palmaris longus + strip of palmar aponeurosis to APB (Camitz)

High Median
Deficit low Median (thumb abduction) + thumb flexion (FPL) + index & Middle finger flexion (FDP & FDS)

Thumb flexion
Brachioradialis to FPL

Index & Middle finger flexion
Suture all 4 FDP tendons together in forearm
or ECRL to FDP index & Middle

Radial
Deficit Wrist extension, finger extension, thumb exten

Wrist ext PT to ECRB

Finger ext FCU or FCR to EDC II-V
(Avoid using FCU in a PIN palsy as ECRL will cause radial d
or FDS III & IV (Middle & ring) to EDS

Thumb ext Palmaris longus to EPL
or FDS (Middle) to EPL (radial lateral band)

Low ulnar
Deficits Hand intrinsics (lumbricals & interossei), ~~thumb abduc~~
~~Punch~~ Thumb adduction, index abduction

To prevent clawing
FDS tenodesis
MCP jt capsulodesis
FDS to lateral bands
ECRL & graft to lateral bands

Thumb adduction
ECRL or brachioradialis to adductor pollicis

Index abduction (may not be needed)
ECRL or APL to 1st dorsal interossei

High ulnar

Deficit FDP (ring & little) & FCU

Little & ring finger flexion

Suture FDP together

Consider

FCR → FCU (removing radial flexors: PL & APL)