Sites of Median Nerve Compression

1. Carpal Tunnel Syndrome at wrist

2. Pronator Syndrome at level of elbow:
   a. Ligament of Struthers (runs from anterior humerus to medial epicondyle)
   b. Supracondylar process (vestigial bone attachment for ligament of Struthers in 1% of population)
   c. Lacertus Fibrosis or bicipital aponeurosis
   d. Between ulnar and humeral heads of pronator teres
   e. FDS fibrous aponeurotic arch

❖ Location based testing:
   ➢ Wrist lesion: sensation index finger pulp
   ➢ Wrist lesion: abductor pollicis brevis and opponens pollicis
   ➢ Elbow lesion: sensation thenar eminence (palmar cutaneous branch arises proximal to carpal tunnel)
   ➢ Elbow lesion: FPL / FDP index finger (OK sign / Kiloh-Nevin ; AIN)

❖ Provocation testing for pronator syndrome:
   ➢ Positive Tinel sign in proximal anterior forearm but negative at wrist
   ➢ Resisted elbow flexion with forearm supination ➔ bicipital aponeurosis
   ➢ Resisted forearm pronation with elbow extended ➔ pronator teres
   ➢ Resisted contraction of FDS middle finger ➔ FDS fibrous arch

❖ Treatment:
   ➢ trial 3-6 months of rest, splinting and NSAIDs
   ➢ splint should avoid forearm rotation
   ➢ surgical decompression if fails with decompression at all 5 sites of compression
   ➢ 80% relief of symptoms
   ➢ immediate post-operative ROM to prevent scarring of median nerve