

CNS Block

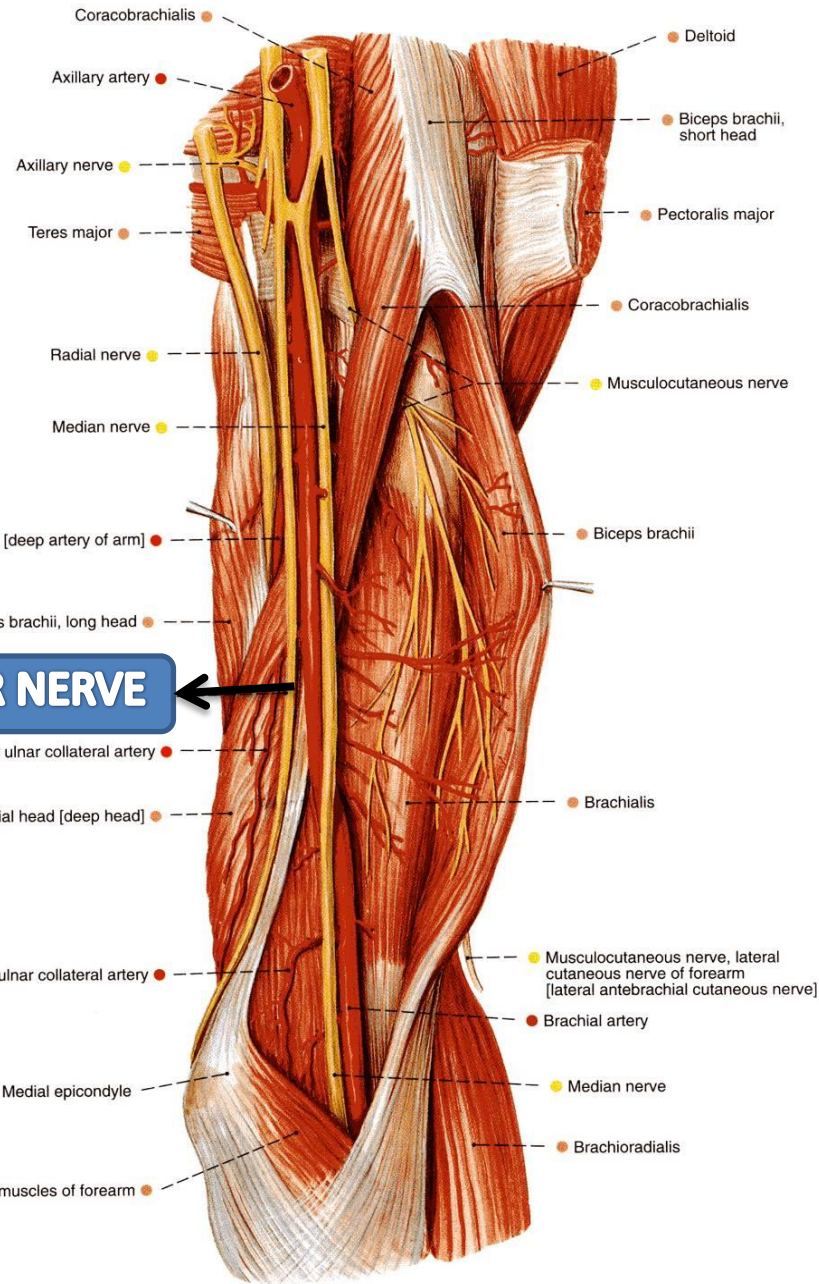


☆ *Anatomy* ☆

Median & Ulnar nerve

This Lecture is done by:

Sara ALShehri–Ghada ALOtibi



Ulnar nerve

-What is the origin of this nerve?!

From the medial cord of the brachial plexus, (C7,8 & T1).



Claw hand

1-What is the nerve affected ?

Ulnar nerve

2-What do we call this characteristic deformity in the hand ?

-Partial claw hand (above the elbow)

-Claw hand (Above the wrist)

3- What is the origin of this nerve ?

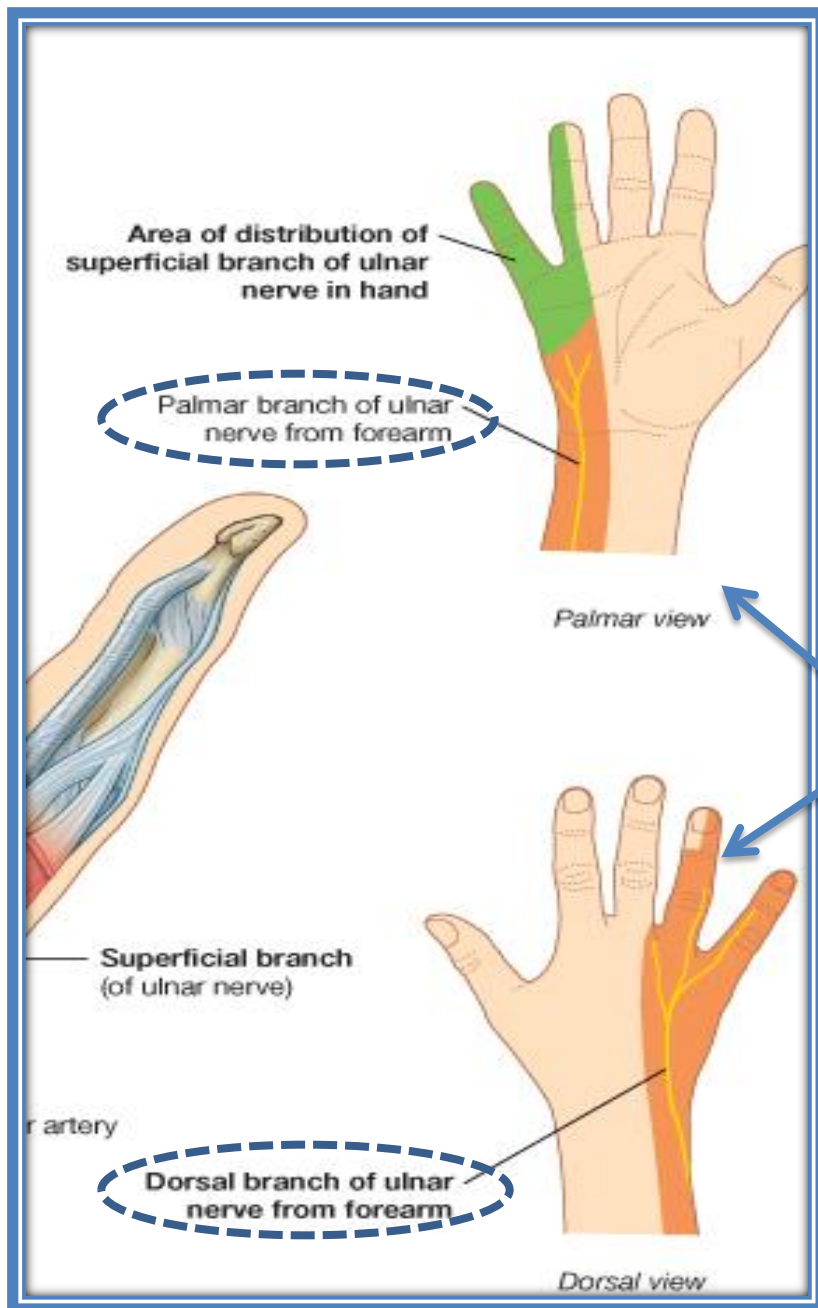
From the medial cord of the brachial plexus, (C7,8 & T1).

4- Which muscles are affected?

1-Weakness of flexion of wrist due to paralysis of Flexor Carpi Ulnaris.

2-Loss of flexion of terminal phalanges of ring & little fingers due to paralysis of medial $\frac{1}{2}$ of flexor Digitorum Profundus.

3-Paralysis of all interossei & medial 2 Lumbricals.



4-Atrophy of **hypothenar muscles**.

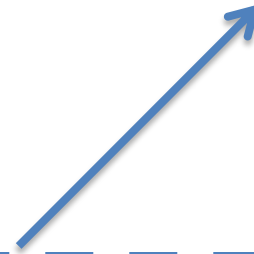
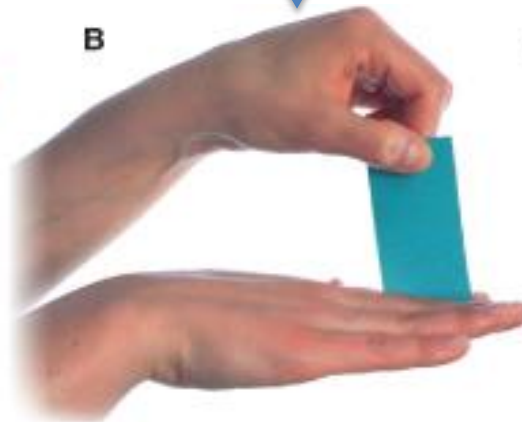
5-The fingers are **hyperextended** at metacarpophalangeal joints and flexed at interphalangeal joints in the ring & little finger.

6-Loss of adduction of thumb due to paralysis of **adductor pollicis**.

Weakness of adduction of the hand due to paralysis of **flexor carpi ulnaris** but the **extensor carpi ulnaris** is intact.

7-Loss of cutaneous sensations on the front & dorsum of medial 1/3 of hand + medial 1 1/2 fingers.

This test is for what ?!
Palmar interossei for adduction of
fingers



This test is for what ?!
Adductor & opponens pollicis

Refer to the diagrams. The diagrams on the right show an area of anesthesia occurring after a cut (shown by the red arrow and dotted line) in the lower left figure). Nerve regeneration over a period of weeks indicates a reduced area of anesthesia as shown. Assume only nerves are cut and not any tendons.

1-The injured nerve is the:

- 1.radial
- 2.median
- 3.musculocutaneous
- 4.ulnar
- 5.median recurrent

Case No 1.



-In most patients, the initial motor changes would include loss in thumb:

1. abduction
2. **adduction**
3. opposition
4. extension
5. flexion

3*What we call the characteristic deformity that happen when this nerve is injured :

1. Ape hand
2. Hand drop
3. Waiter tip
4. **Claw hand**

Case No 1.



A- The ulnar nerve is a branch of which cord of the brachial plexus:

1. **medial**
2. lateral
3. Posterior

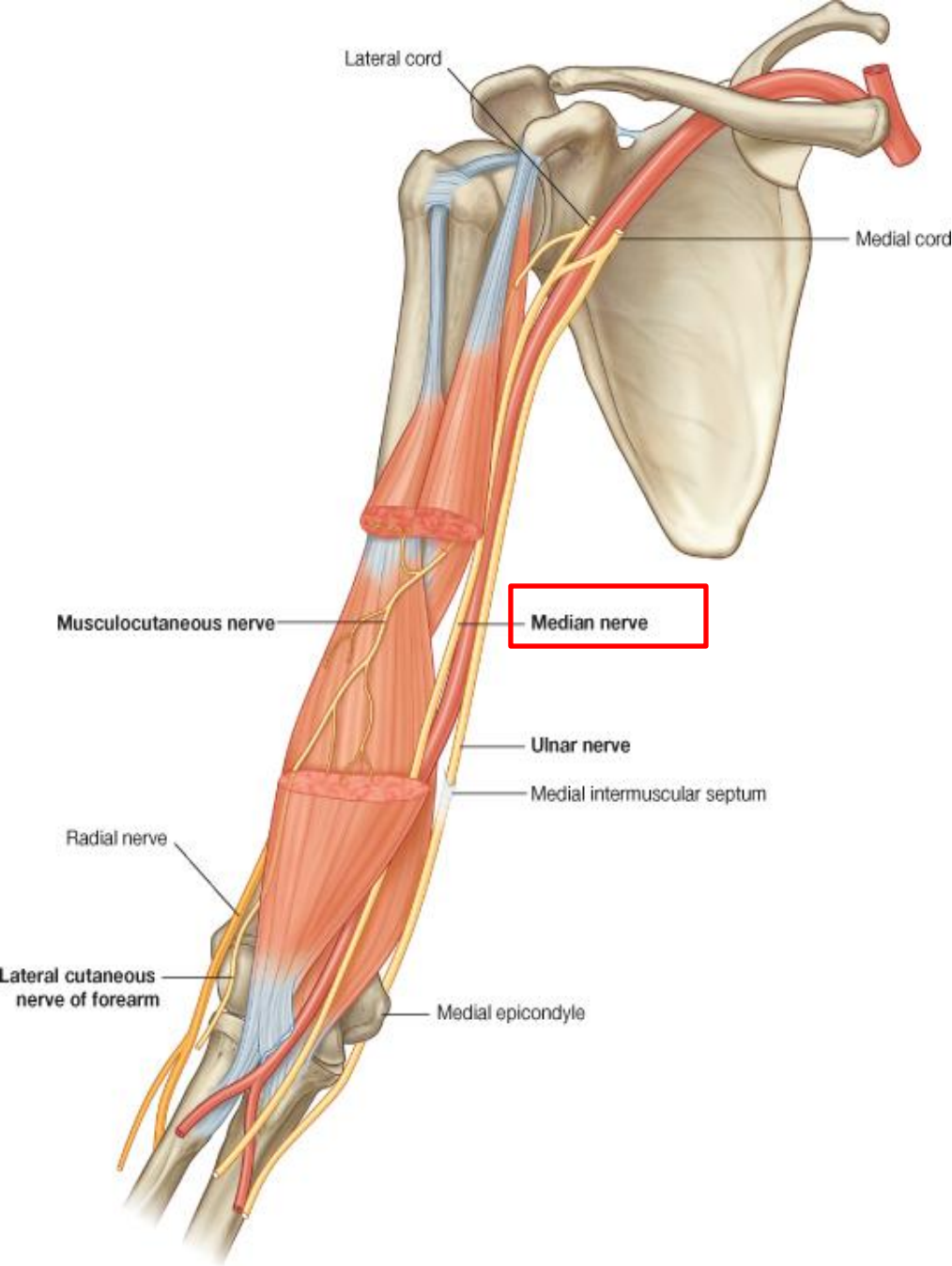
B- Muscles of the hypothenar eminence are innervated by the:

1. median nerve
2. **ulnar nerve**
3. radial nerve
4. median and radial nerves
5. median and ulnar nerves

C- A patient is unable to hold a piece of paper tightly between the fingers: Which one of the following nerve injuries is the possible cause?

1. radial nerve
2. axillary nerve
3. **ulnar nerve**
4. median nerve

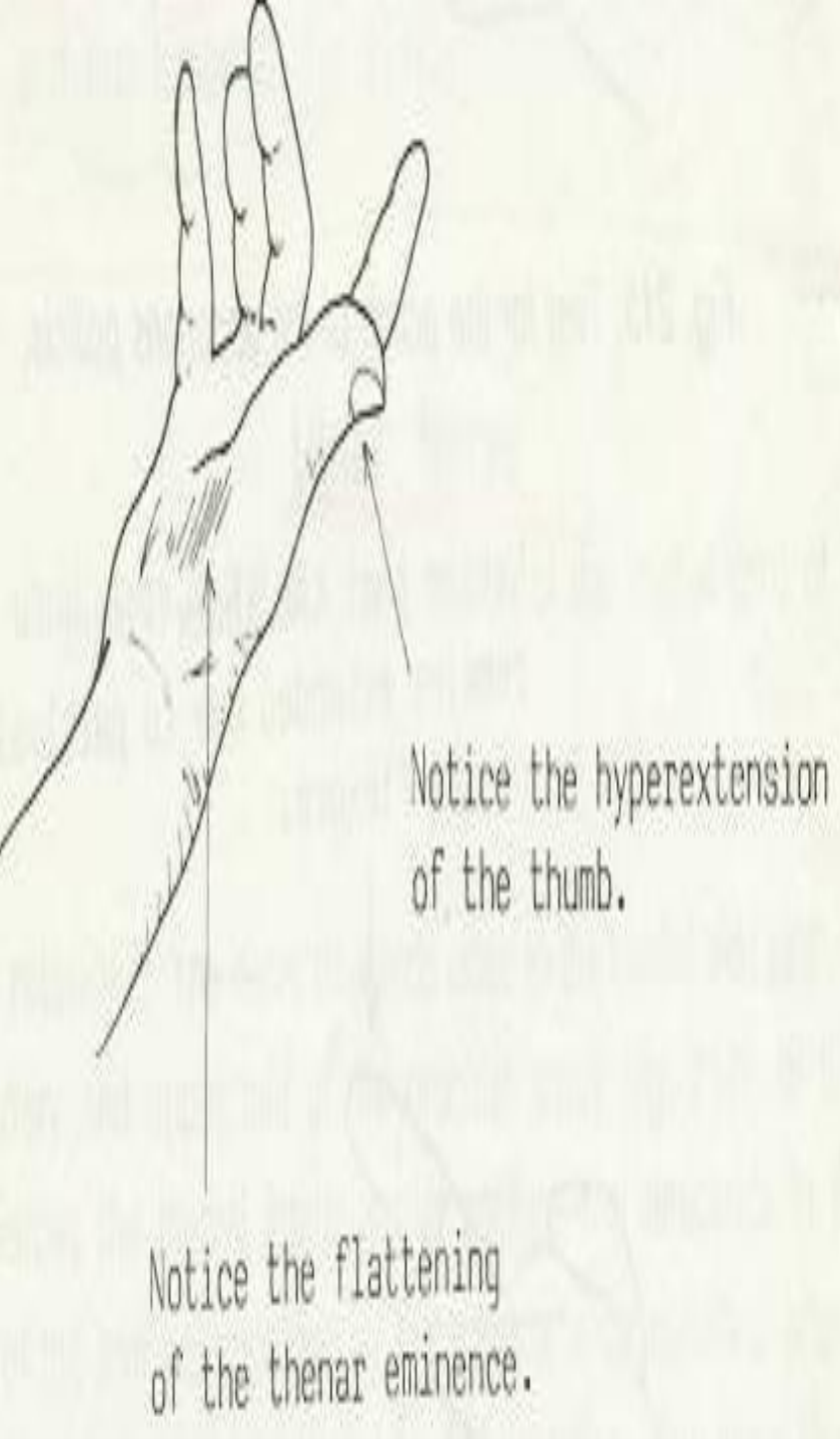
Test your self



Median nerve

-What is the origin of this nerve?!

By 2 roots from the medial and lateral cords of brachial plexus



1-What is the affected nerve?

Median nerve

2-What do we call this characteristic deformity in the hand ?

APE HAND

3- What is the origin of this nerve ?

medial and lateral cords of brachial plexus

4- which muscles are affected?

1-Loss of flexion of thumb due to paralysis of flexor pollicis longus & brevis

2- flattening of thenar muscles due to atrophy of thenar muscles

3-Loss of opposition of thumb due to paralysis of opponens pollicis

4-Loss of cutaneous sensations on the hollow of palm of hand + palmar surfaces of lateral 3 $\frac{1}{2}$ fingers



-A patient came with a slight flattening of thenar eminence. burning pain and on examinations we found loss of cutaneous sensations on palmar aspect of lateral 3 $\frac{1}{2}$ fingers .**There was no paresthesia over the thenar eminence**

-What do we call this syndrome ?
"CARPAL TUNNEL" syndrome

-Which nerve is effected ?
Median nerve

Case No 1.

1- A man came with Weakness of flexion of wrist ,Loss of pronation ,Loss of flexion of middle phalanges of medial 4 fingers, Loss of flexion of terminal phalanges of index & middle fingers.

A-Which nerve is affected ?

Median nerve

B- Which muscles are affected ?

1-Weakness of flexion of wrist due to paralysis of flexor carpi radialis & palmaris longus

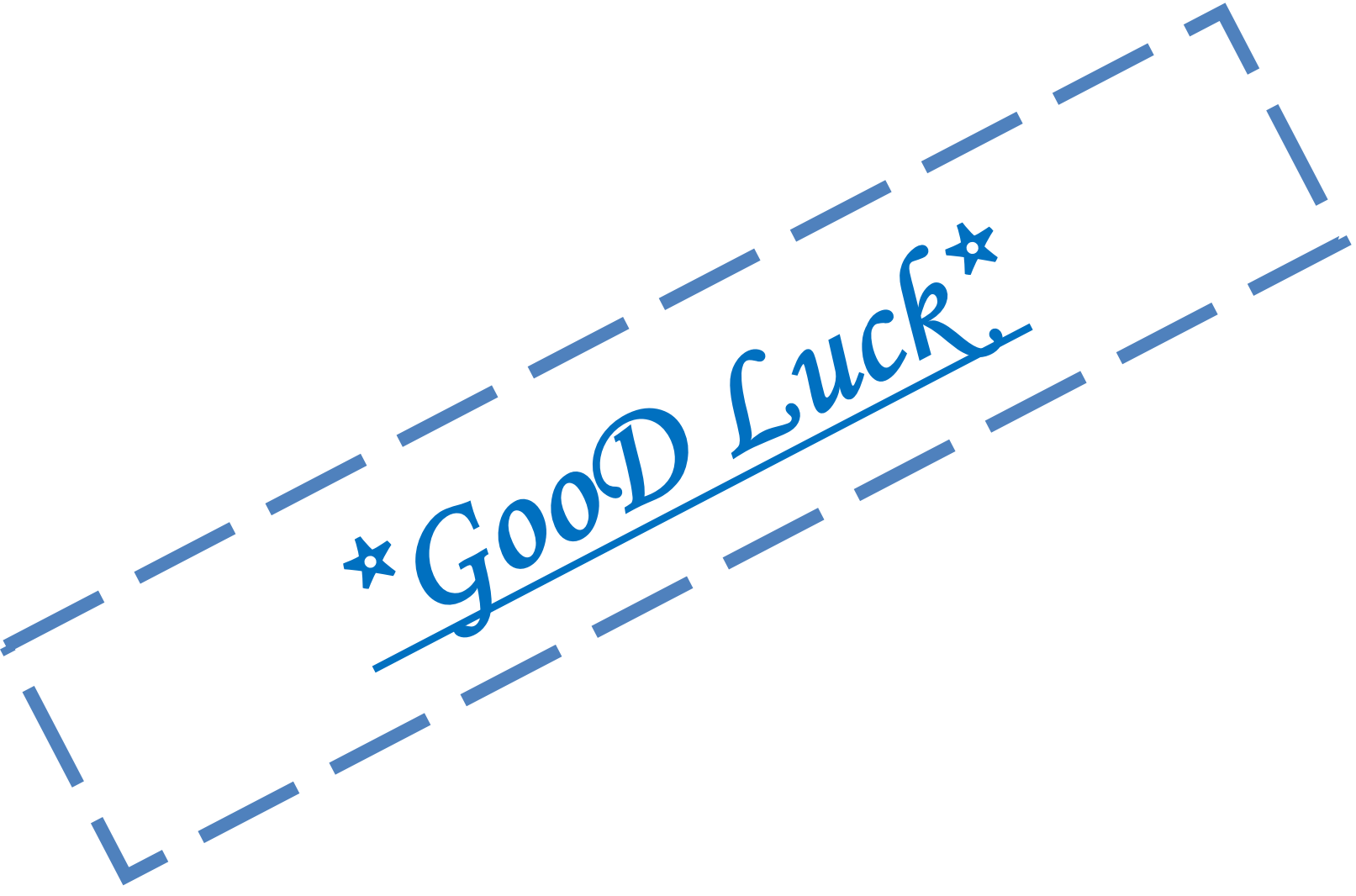
2- Loss of pronation due to paralysis of pronator teres & pronator quadratus

3-Loss of flexion of middle phalanges of medial 4 fingers due to paralysis of flexor digitorum superficialis.

4-Loss of flexion of terminal phalanges of index & middle fingers due to paralysis of lateral $\frac{1}{2}$ of the flexor digitorum profundus

Case No

2.



Good Luck