

Laboratory and Electrophysiological Evaluation I

- CBC, chemistry panel, thyroid function studies, vitamin B12, folate, and CEA failed to discover a cause of the patient's neuropathy.
- Autoimmune studies (ESR, ANA, RA, SPEP) were normal.
- EMG of the upper limbs showed signs of a LMN lesion (fibrillations, positive sharp waves) in the right first dorsal interosseous and abductor digiti minimi muscles consistent with the diagnosis of a right ulnar mononeuropathy.

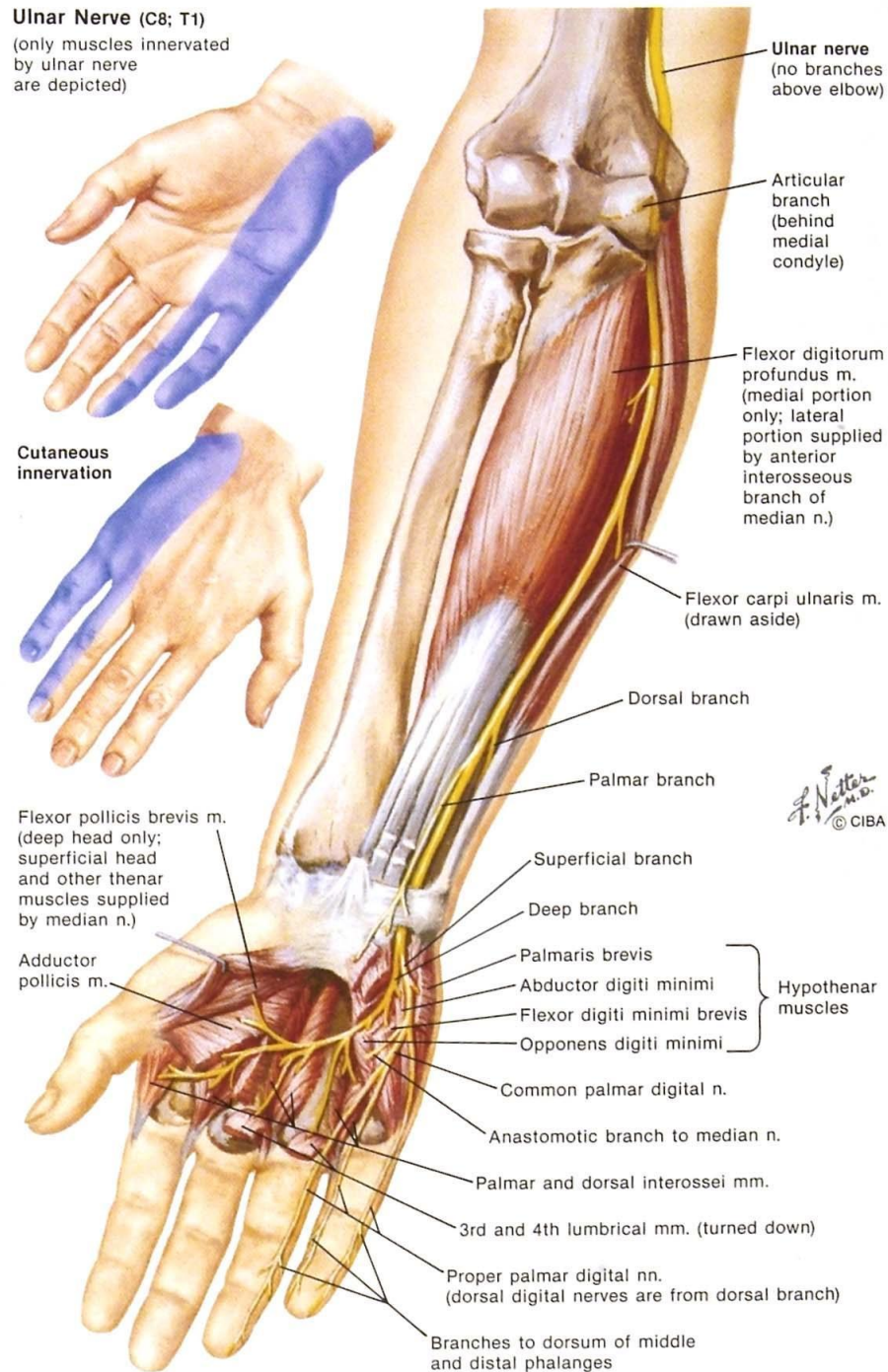
Laboratory and Electrophysiological Evaluation II

- Nerve conduction studies (NCS) showed a severe slowing of right ulnar nerve conduction velocity across the elbow.
- NCS showed normal right ulnar nerve conduction velocity below the elbow (below elbow to wrist segment of the nerve).

Ulnar Nerve (C8; T1)

(only muscles innervated by ulnar nerve are depicted)

Cutaneous innervation



Ulnar nerve
(no branches
above elbow)

Articular
branch
(behind
medial
condyle)

Flexor digitorum
profundus m.
(medial portion
only; lateral
portion supplied
by anterior
interosseous
branch of
median n.)

Flexor carpi ulnaris m.
(drawn aside)

Dorsal branch

Palmar branch

Superficial branch

Deep branch

Palmaris brevis

Abductor digiti minimi

Flexor digiti minimi brevis

Opponens digiti minimi

Hypothenar
muscles

Common palmar digital n.

Anastomotic branch to median n.

Palmar and dorsal interossei mm.

3rd and 4th lumbrical mm. (turned down)

Proper palmar digital nn.
(dorsal digital nerves are from dorsal branch)

Branches to dorsum of middle
and distal phalanges

Flexor pollicis brevis m.
(deep head only;
superficial head
and other thenar
muscles supplied
by median n.)

Adductor
pollicis m.

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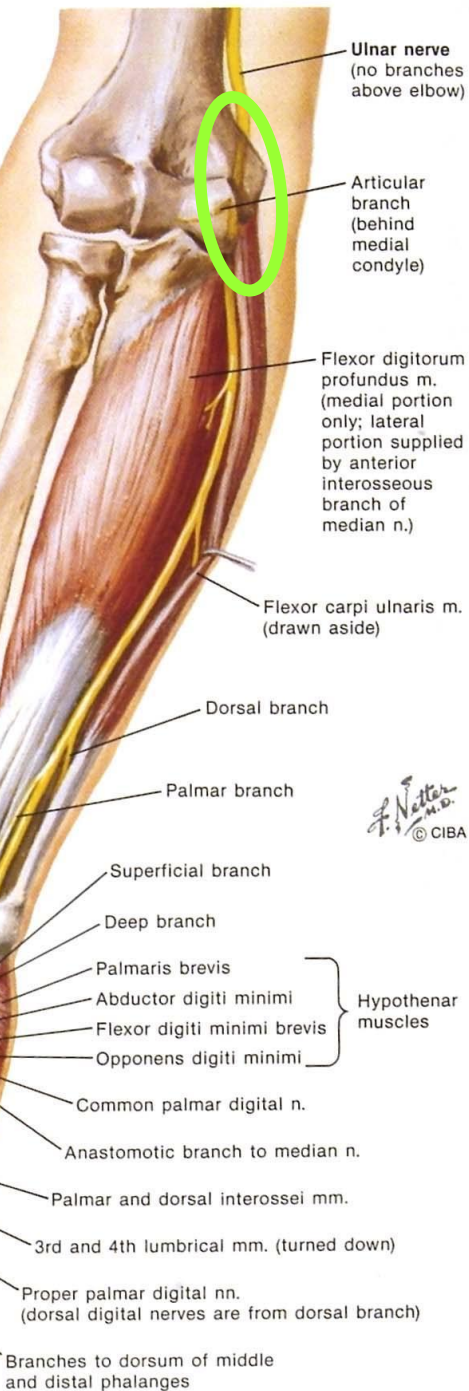
Ulnar Nerve (C8; T1)

(only muscles innervated by ulnar nerve are depicted)

Cutaneous innervation

Flexor pollicis brevis m. (deep head only; superficial head and other thenar muscles supplied by median n.)

Adductor pollicis m.



Ulnar nerve (no branches above elbow)

Articular branch (behind medial condyle)

Flexor digitorum profundus m. (medial portion only; lateral portion supplied by anterior interosseous branch of median n.)

Flexor carpi ulnaris m. (drawn aside)

Dorsal branch

Palmar branch

Superficial branch

Deep branch

Palmaris brevis

Abductor digiti minimi

Flexor digiti minimi brevis

Opponens digiti minimi

Hypothenar muscles

Common palmar digital n.

Anastomotic branch to median n.

Palmar and dorsal interossei mm.

3rd and 4th lumbrical mm. (turned down)

Proper palmar digital nn. (dorsal digital nerves are from dorsal branch)

Branches to dorsum of middle and distal phalanges

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