

Criteria for localisation of ulnar neuropathy at the elbow (UNE)

Part A shows the scoring of motor recordings from different muscles or a sensory recording across the elbow. Decrease in conduction velocity (CV) in the elbow and forearm segments are expressed in standard deviations (SD) and the difference in CV between the segments (Δ CV) in m/s. Part B shows how the scores for motor and sensory studies are combined to assess the certainty of the UNE. A certainty of probable UNE can be obtained with one "A", e.g. from a motor study to abductor digiti minimi (ADM), while a definite diagnosis of UNE requires at least two "A"s or one "A" and two "B"s, which can be obtained by addition of motor recordings to the first dorsal interosseous (FDI) or adductor pollicis (AP) muscles or a sensory near-nerve recording including the elbow segment.

A. Score for each recording to a muscle or sensory across the elbow

CV elbow	CV forearm	Δ CV (elbow-forearm)	Conduction block*	Score
$\downarrow \geq 3$ SD	Normal			A
$\downarrow 2-3$ SD	Normal	> 20 m/s		A
$\downarrow 2-3$ SD	Normal		Yes	A
$\downarrow 2-3$ SD	Normal			B
$\downarrow > 2$ SD	$\downarrow > 2$ SD	> 20 m/s	Yes	A
$\downarrow > 2$ SD	$\downarrow > 2$ SD	> 20 m/s		B

Prerequisites

CMAP amplitude > 0.5 mV. In case of CMAP amplitude < 0.5 mV the interpretation is switched one step down, i.e. A \rightarrow B and B \rightarrow “-“.

* Motor conduction block: $\geq 50\%$ reduction in CMAP amplitude or $\geq 40\%$ area reduction and $< 30\%$ temporal dispersion (AAEM and Olney, 1999).

B. Certainty of UNE

Definite

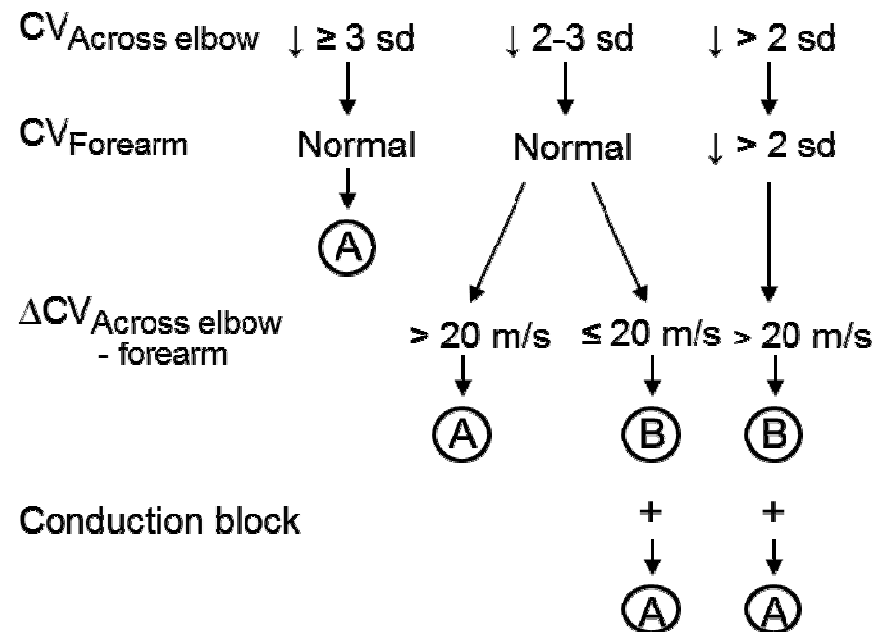
AA or ABB

Probable

A or BBB

CMAP: Compound muscle action potential, CV: Conduction velocity, SD: Standard deviation, UNE: Ulnar neuropathy at elbow

Lokalisation af ulnarisaffektion



Klinisk sikkerhed af lokaliseringen

Sikkert lokaliseret	AA; ABB
Formentlig lokaliseret	A; BBB

Forudsætninger

Motorisk amplitude $> 0,5 \text{ mV}$.

Hvis det motoriske svar er under $0,5 \text{ mV}$ rykkes fortolkningen et trin ned, dvs A → B og B → "intet".

Motorisk blok: 50% amplitudereduktion og højst 30% temporal dispersion eller 40% arealreduktion (AAEM, Muscle and Nerve, suppl. 8, 1999).

Til grund for beregninger og grænseværdier ligger normalmateriale fra *Rigshospitalets Blå Bog*.

Undersøgelse af n. ulnaris mhp. lokalisation af ulnaris affektion ved albuen: motorisk undersøgelse til m. abductor digiti V og til 1. dorsale interos/m. adductor pollicis.

Desuden kan n. ulnaris undersøges sensorisk med near-nerve teknik.

Dvs. i alt kan der undersøges 3 segmenter over alburegionen og sikkerheden af n. ulnaris affektion i de enkelte segmenter vurderes ud fra skemaet og den samlede sikkerhed for en lokaliseret n. ulnaris affektion kan herefter bedømmes (antal A'er og B'er)

Ledningshastighed m/s		20 år	50 år	70 år
Motorisk	normalværdi	61	57	49
	Nedre grænse, 3SD	46	46	40
Sensorisk	Normalværdi	63	58	52
	Nedre grænse, 3SD	43	43	40