

Nerve conduction studies of Brachial plexus in flaccid hemiplegic patients

Thesis

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List of Abbreviations

Axil. amp: Axillary nerve amplitude.

Axil. Lat: Axillary nerve latency.

CMAP: Compound motor action potential

CT: Computerized Tomography.

FES: Functional electrical stimulation.

HTN: Hypertension.

IV rt-PA: Intravenous Recombinant Tissue Plasminogen Activator.

Med. Cond. Vel.: Median nerve conduction velocity.

Med. Dist.amp.: Median nerve distal amplitude.

Med. Dist.Lat: Median nerve distal latency

Med. Elb. Amp.: Median nerve elbow amplitude.

Med. Erb's Amp.: Median nerve erb's amplitude.

Med. erb's. Lat: Median nerve erb's latency.

Med. PS. Lat: Median nerve peak sensory latency

MRA: magnetic resonance arteriography

MRI: Magnetic resonance imaging.

Musclo. amp: Musculocutaneous nerve amplitude.

Musclo. Lat: Musculocutaneous nerve latency.

mV: Millivolt

NCS: Nerve conduction studies.

Rad. Cond. Vel.: Radial nerve conduction velocity.

Rad. Dist.amp.: Radial nerve distal amplitude.

Rad. Dist.Lat: Radial nerve distal latency

Rad. Erb's. Amp.: Radial nerve erb's amplitude.

Rad. erb's. Lat: Radial nerve erb's latency.

Rad. PS. Lat: Radial nerve peak sensory latency

SD: Standard deviation.

SNAP: Sensory nerve action potential.

Supra. amp: Supra scapular nerve amplitude.

Supra. Lat: Supra scapular nerve latency.

TENS: Transcutaneous electrical nerve stimulation

TIA: Transient ischemic attack.

Uln. Cond. Vel.: Ulnar nerve conduction velocity.

Uln. Dist.amp.: Ulnar nerve distal amplitude.

Uln. Dist.Lat: Ulnar nerve distal latency.

Uln. Elb. Amp.: Ulnar nerve elbow amplitude.

Uln. Erb's Amp.: Ulnar nerve erb's amplitude.

Uln. erb's. Lat: Ulnar nerve erb's latency.

List of Abbreviations

Uln. PS. Lat: Ulnar nerve peak sensory latency.

UMNL: Upper motor neuron lesion.

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Introduction

Cerebrovascular stroke is a sudden onset neurological deficit, due to compromised blood supply to a part of cerebrum or brain-stem. It is a common cause of hospitalization and disability and the third leading cause of death worldwide after heart diseases and cancer (*Zorowitz et al., 2004*).

Following a stroke, the brain and body progress through series of stages, which are: (1) transischemic attack, (2) flaccidity, (3) spasticity, and (4) synergy. Once the inciting injury to the brain occurs, the flaccid stage evolves with a state of areflexia. This stage of areflexia includes loss of muscle tone and volitional motor activity, variable sensory loss, and loss of muscle stretch reflexes. Muscular support of the humeral head in the glenoid fossa by the supraspinatus and deltoid muscles is lost. This leads to downward and outward subluxation of the humeral head, with the only support coming from the joint capsule. (*Faghri, 1994*). The migration of the humeral head in the shoulder joint can lead to overstretching of the capsule, tendons and ligaments along with the brachial plexus (*Chaco and Wolf, 1971*).