

Superficial Radial Sensory (Antidromic)***Electromyograph Instrument Parameters:***

Filter Settings/Frequency Response: 20 Hz - 2,000 Hz
Sweep Speed: 1 - 2 milliseconds/Division
Sensitivity/Gain: 5 - 20 microvolts/Division

Patient Position: (Illustration 11) The patient is positioned supine with the arm abducted to approximately 45 degrees. The elbow is extended and the forearm is in a resting, neutral (mid-range supination and pronation). The thumb is pointed toward the ceiling.

Electrode Placement: (Illustration 11)

Active (Recording) Electrode: The active recording electrode is positioned over the portion of the nerve which can be palpated over an extended extensor pollicis longus tendon at or about the dorsal-radial aspect of the wrist.

Reference Electrode: The reference electrode is positioned distal to the active electrode on the dorsum of the hand.

Ground Electrode: The ground electrode is placed between the active and stimulating electrodes on the dorsal surface of the forearm.

Electrostimulation: (Illustration 11)

Percutaneous electrostimulation is performed as follows:

Distal stimulation is applied along the dorsolateral border of the radius, lateral to the cephalic vein, not less than 10 cm proximal to the active (recording) electrode.

TECHNICAL COMMENTS:

The extensor pollicis longus tendon forms the medial border of the anatomic "snuff box". By running the examiner's index fingernail along this tendon distal to the wrist, the superficial radial sensory nerve can be palpated. The active (recording) electrode should be placed at the intersection of the tendon and nerve.

Stimulation of the superficial radial nerve is usually accomplished using a low voltage, short duration stimulus. Stronger stimulation may spread to the anterior interosseous branch of the median nerve and produce an unwanted motor response or a volume conducted artifact. When this occurs, slight flexion of the distal phalanx of the thumb will be seen.

The subject may be able to help locate the nerve by reporting a "tingling" sensation along the dorsum of the thumb, index and/or second finger when a stimulus is delivered.

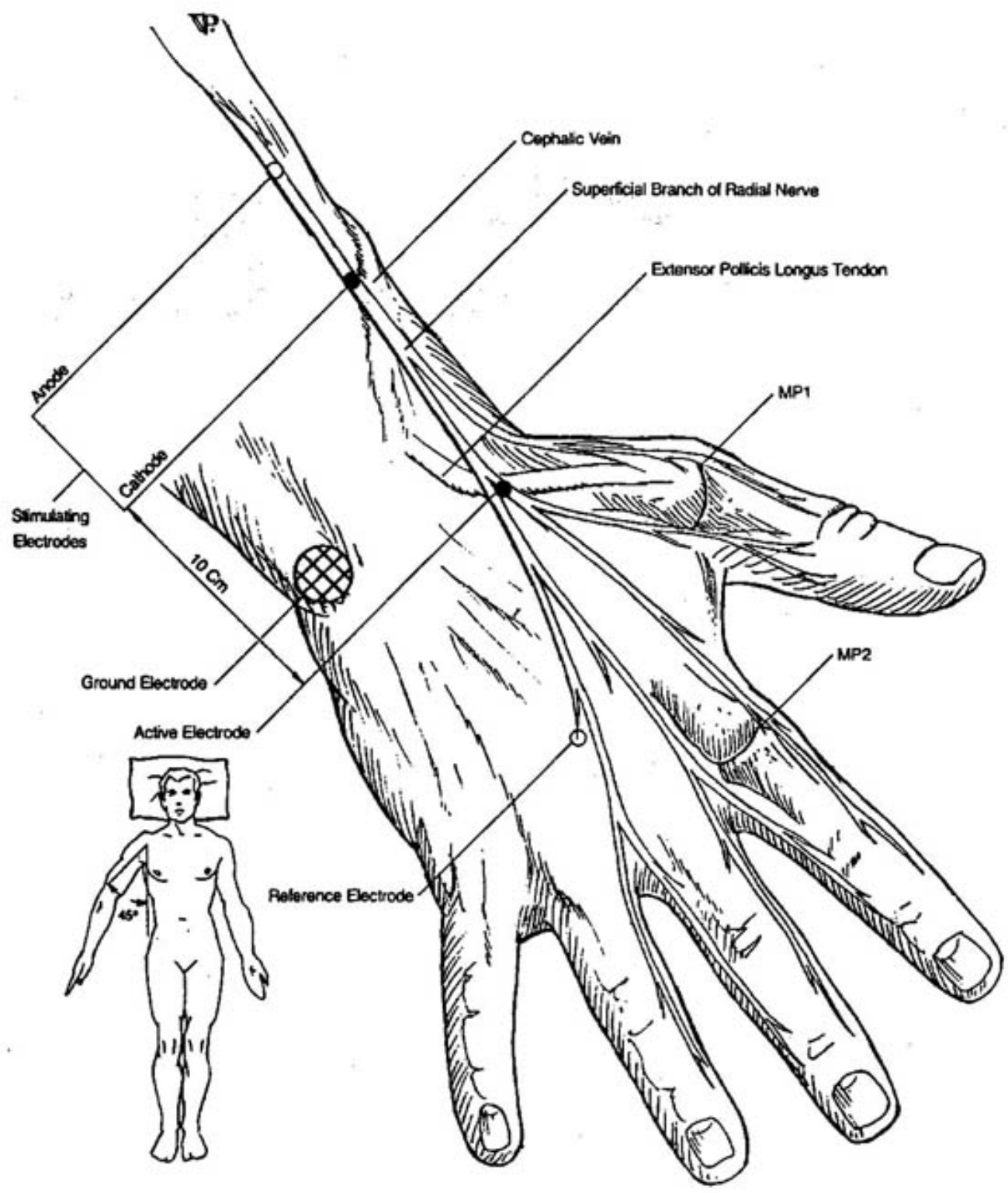


ILLUSTRATION 11