CLINICAL PRACTICE

Clinical Images

Ulnar Distribution Paresthesia, Weakness and Atrophy: a Characteristic Presentation of Cubital Tunnel Syndrome

Maggie So, MD, FACP and Randall S Edson, MD, MACP, FIDSA

Department of Internal Medicine, California Pacific Medical Center, San Francisco, CA, USA.

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A 69-year-old man presented with 6 months of progressive paresthesias involving the left fourth and fifth fingers and weakness of left thumb adduction. There was no history of injury or occupational overuse. Examination of the left hand revealed atrophy of the first dorsal interosseous muscle (Fig. 1), diminished sensation of the fourth and fifth fingers, and weakness of finger abduction/adduction (interossei) and thumb adduction (adductor pollicis). Electromyography and nerve conduction studies were consistent with compression of the ulnar nerve at the cubital tunnel, typical of cubital tunnel syndrome.

Ulnar nerve entrapment is the second most common compressive neuropathy after carpal tunnel syndrome and frequently affects the non-dominant extremity.[1, 2] Electromyography can pinpoint the site of entrapment (cubital tunnel or ulnar tunnel). The cubital tunnel, through which the ulnar nerve traverses, is the space on the dorsomedial elbow between the medial epicondyle of the humerus, olecranon process of the ulna, Osborne's ligament, and medial collateral ligaments.[3] Symptoms may include paresthesias of the fourth and fifth fingers, atrophy of the dorsal interossei, and weakness of thumb adduction, all of which are potentially irreversible. Mild symptoms are treated with lifestyle modification, but this patient's muscle atrophy required cubital tunnel decompression and ulnar nerve transposition with gradual relief of symptoms.

Corresponding Author: *Randall S Edson, MD, MACP, FIDSA; Department of Internal Medicine California Pacific Medical Center, San Francisco, CA 94115, USA (e-mail: edsonr@sutterhealth.org).*

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Figure 1 First dorsal interosseous muscle atrophy of the left hand secondary to ulnar neuropathy.