Marked Thenar Wasting in Long Standing Carpel Tunnel Syndrome

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A 45-year-old previously healthy housewife presented with pain, numbness and weakness of the right hand for the last six years. Pain was gradual in onset and moderate to severe in intensity. Pain and numbness increased on doing household chores, holding telephone in right hand and on rinsing clothes. There was no history of neck pain or trauma. Her sleep pattern was disturbed and numbness made her get up at night and shake her hands (the Flick sign) and massage them to relive the symptoms. She had been using NSAIDs, carbamezapine (600 mg in three divided doses daily) and night splints for the last three years without relief.

On examination, she had flattening of thenar eminence of the right hand (Figure 1) with wasting of the abductor policis brevis (APB) (Figure 2). Thumb abduction and opposition were weak and there was sensory loss to pinprick and light touch in the distribution of median nerve in the hand. Two-point discrimination was more than 6 mm. Phalen's sign and Tinel's sign were positive, while Spurling's test and shoulder impingement tests were negative. Reflexes and neurological examination of the ulnar and radial nerves was normal. A diagnosis of right-sided carpal tunnel syndrome (CTS) was made and electrodiagnostic evaluation was obtained. Sensory and motor responses in the right median nerve were not recordable, while nerve conduction studies (NCS) of the ulnar nerve and contralateral asymptomatic limb were normal. Electromyography (EMG) showed spontaneous activity with large polyphasic motor units action potential and discrete recruitment pattern in right APB only. EMG of the right flexor policis longus, flexor digitorum indicis and pronator teres were normal which ruled out the involvement of other nerves. The patient did not have diabetes, hypothyroidism, rheumatoid arthritis or history of wrist trauma. In the absence of these more frequent causes of CTS, it can be safely assumed that this was the result of repetitive wrist motion of the dominant hand as part of her daily chores (cumulative trauma disorders). A final diagnosis of severe right CTS was made and the patient was referred for surgical release of carpal ligament. However, the patient did not keep her follow-up appointments and was lost to follow-up.

Figure 1: Flattening of right thenar eminence

Figure 2: Marked atrophy of right APB

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CTS is a complex of symptoms and signs brought on by compression of the median nerve as it travels through the carpal tunnel. It is the most common entrapment neuropathy, but there are no recognized standard criteria for the diagnosis of CTS [1]. Patients with nerve compression are more prone to develop musculoskeletal impingement which might be missed on clinical examination and can cause a protracted course of pain and illness even after neurogenic compression has been relieved. Majority of patients with CTS are treated conservatively and options include physical therapy, ultrasound, wrist splinting, steroid injection in the carpal tunnel, and the use of NSAIDs. Motor and sensory NCS are considered the best means for assessing the function of the median nerve [2]. The unrecordable APB-compound muscle action potential indicates severe axonal degeneration of thenar motor fibers, which warrants early surgical release [3]. Surgical treatment involves division of the transverse carpal ligament to increase the space in the carpal tunnel. Surgical release can be open or through laparoscopic surgery.

REFERENCES

1. Chan L, Turner JA, Comstock BA, Levenson LM, Hollingworth W, Heagerty PJ, et al. The relationship between electrodiagnostic findings and patient symptoms and function in carpal tunnel syndrome. *Arch Phys Med Rehabil* 2007; 88:19-24.
2. Werner RA, Andary M. Carpal tunnel syndrome: pathophysiology and clinical neurophysiology. *Clin Neurophys* 2002; 113:1373-1381.
3. Shi Q, MacDermid JC. Is surgical intervention more effective than non-surgical treatment for carpal tunnel syndrome? A systematic review. *J Orthop Surg Res* 2011; 6:17.