P-110

# Flexor Carpi Radialis Tenosynovitis Mimicking Carpal Tunnel Syndrome: Case Report

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## Introduction

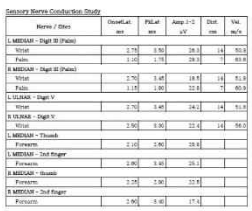
Disorders of the flexor carpi radialis(FCR) tendon in wrist and/or hand may present clinical symptoms similar to or confused with carpal tunnel syndrome. This case demonstrates flexor tendinopathy in wrist and hand, showing the abnormality of median motor nerve conduction with median sensory sparing in electrodiagnostic study.

## Case

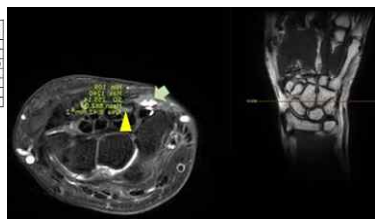
A patient was 66-year-old woman, having the medical history of non–insulin-dependent diabetes mellitus, hypertension, and chronic hepatitis B, presented with left thumb abductor weakness, which had worsened 2 months ago. She is right-handed and reported no recent surgery or trauma to her left wrist. She denied any numbness or paresthesia in left hand. The physical examination showed muscles atrophy in left abductor pollicis brevis and left opponens pollicis muscles. Phalen and Tinel testing were negative.

Sensory nerve conduction studies were normal in left median and ulnar nerves, but motor nerve conduction studies showed decreased amplitudes of CMAPs in left abductor pollicis brevis muscle recording at median nerve stimulation(FIG1). Electromyography studies revealed abnormal spontaneous activities at rest and single interference patterns on maximal volition in left abductor pollicis brevis muscle.

Magnetic resonance imaging (MRI) demonstrated tenosynovitis along flexor carpi radialis tendon at proximal carpal bone to second metacarpal insertion level, and ganglion is seen adjacent to flexor carpi radialis tendon. Also, it demonstrated that the left thenar muscles is supplied not only primarily by the median nerve, but also by some ulnar nerve. However, MRI demonstrated no definite abnormality of median nerve(area: 8.42 ㎟) along carpal tunnel in left hands (FIG 2.).



(Fig. 1)



(Fig. 2)

(Fig. 1) Electrodiagnostic study showed the abnormal finding in left median motor nerve conduction study.

(Fig. 2) Magnetic resonance imaging (MRI) demonstrated tenosynovitis along flexor carpi radialis tendon at proximal carpal bone to second metacarpal insertion level, and ganglion is seen adjacent to flexor carpi radialis tendon(arrow), but no definite abnormality of median nerve along carpal tunnel in left hands (arrow head).

## Discussion

The FCR tendon is encased by a fibroosseous tunnel formed by a vertical retinacular septum adjacent to the flexor retinaculum of the carpal tunnel. Due to their anatomic proximity, disorders of the FCR tendon may mimic disease at the base of the thumb or carpal tunnel syndrome. This case demonstrates the significance of multidisciplinary approach in diagnosing disorders clinically mimicking carpal tunnel syndrome.