

Median nerve entrapment due to accessory palmaris longus muscle: MRI and sonography findings

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DESCRIPTION

Peripheral neuropathies of the median nerve at various locations in the upper extremity are common, but compression of the median nerve at the level of the wrist due to an anomalous muscle is rare though presented in the English database.^{1,2}

Here, we present a 35-years-old left-handed woman who had a swelling in the distal third of her left forearm, present since childhood, fluctuating in size and causing paresthesias on the palm.

On physical examination, a swelling on the volar aspect was detected. Electromyography was consistent with carpal tunnel syndrome of moderate severity. MRI revealed a subcutaneous soft tissue of muscle intensity with a lenticular shape (figure 1A,B). Due to its anatomical position, this was identified as a distal muscle belly variation of the palmaris longus muscle. At the distal part of the muscle, the median nerve was

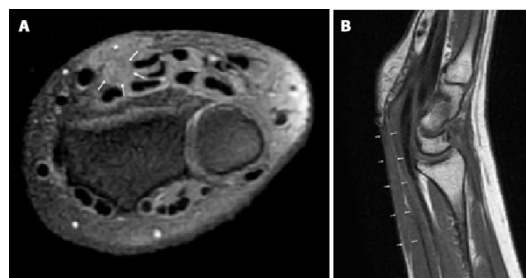


Figure 1 (A) Transverse fat-suppressed Proton density (PD)-weighted image shows increased signal intensity of the median nerve (arrows) dorsal to the accessory muscle (*) and (B) accessory palmaris longus muscle is seen on sagittal T1-weighted image of distal forearm and wrist (arrows).

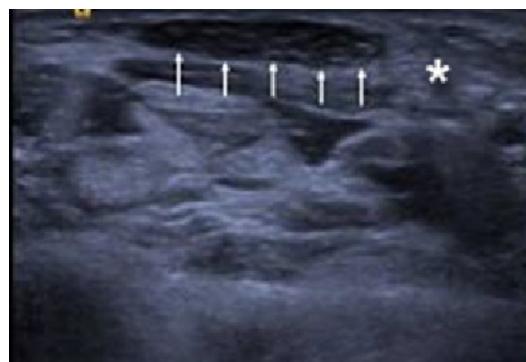


Figure 2 Transverse ultrasound image of the wrist shows the median nerve (*) with increased echogenicity next to the accessory muscle (arrows).

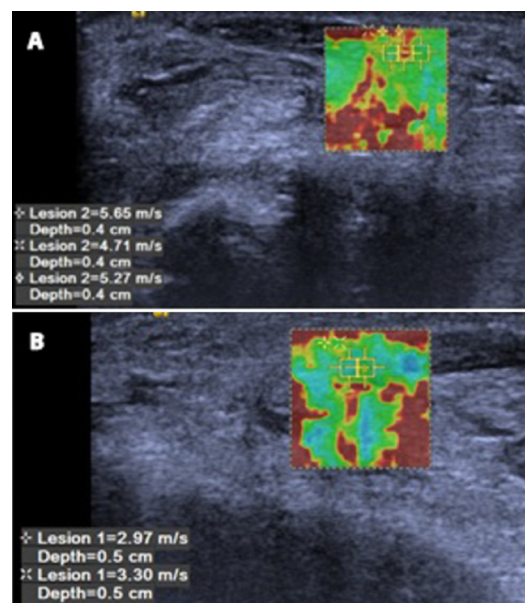


Figure 3 Ultrasound elastography shows the stiffness of the nerve with increased shear wave velocity (A) compared with the normal side (B).

passing through the posterior surface, and there was a segmental thickening and increased signal intensity of the median nerve.

The muscle was confirmed by ultrasonography, and the echogenicity of the median nerve was increased (figure 2). Shearwave elastography detected an increased stiffness at the median nerve (figure 3A,B). Several authors have associated the distal muscle belly variation with nerve entrapment phenomenon at the wrist.²

Entrapment is thought to occur due to direct compression but occasionally immediately proximal to the carpal tunnel or muscle lie in a position whereby muscular contraction would lead to compression of the median nerve.

Learning points

- ▶ Compression of the median nerve at the level of the wrist due to an anomalous muscle is rare.
- ▶ Accessory palmaris longus muscle could cause dynamic median nerve compression in the wrist.
- ▶ Radiological examinations such as ultrasonography and MRI should be performed for differential diagnosis of patients with median nerve compression.

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