

Other

Ultrasonography may be more valuable to localize ulnar nerve entrapment without conduction block in electrodiagnosis

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Ulnar neuropathy at the elbow (UNE) is thought to most often occur from compression of the nerve within the cubital tunnel. The sensitivity of electrodiagnosis for UNE is much lower than for median mononeuropathy at the wrist. The reasons for false-negative electrodiagnostic results are not always known but may include improper elbow position and early or mild ulnar nerve involvement. Ultrasound (US) is an emerging tool for the evaluation of neuromuscular conditions. US findings in patients with UNE and no conduction block have been rarely reported. We describe electrodiagnosis and US findings in a 23-year-old man with pain and numbness in his left 4th and 5th fingers. There was no definite weakness. His symptoms had begun three months ago when he exercised heavily for several months. Nerve conduction study (NCS) revealed reduced amplitude of left dorsal ulnar cutaneous nerve and distal ulnar sensory nerve without definite conduction block in inching study at the elbow. Electromyography showed mild denervation potentials in left adductor digiti minimi and first dorsal interossei muscle. US showed increased cross sectional area of ulnar nerve below elbow. He received surgical treatment and his symptoms nearly fully recovered 4 months after surgery. This indicates that ultrasound may be a useful tool for assessing an entrapment site in UNE symptoms without exact localization in electrodiagnosis.