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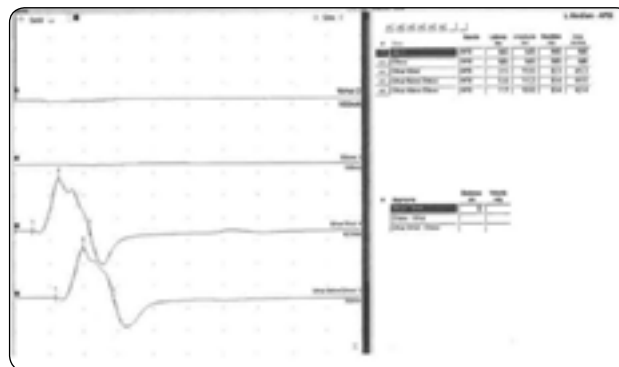
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Riche-Cannieu anastomosis associated with carpal tunnel syndrome: A case report

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Anomalous anastomoses between the Median (MN) and Ulnar (UN) nerves in the upper extremity are well documented. The commonest anomalous innervation is Martin Gruber Anastomosis (MGA), described as the connection from MN to UN in the forearm. Another anomalous connection is from the UN to the MN in the hand and is known as the Riche-Cannieu anastomosis (RCA). This anomaly was described in 1897 by Riche and Cannieu with the findings of a cross over in the palm, between the deep branch of the UN and the recurrent branch of the MN. The RCA is described in cadaveric dissections with a frequency that ranges from 3.12 to 77%. In RCA, three patterns may be observed which include both sensory and all intrinsic hand muscles innervated exclusively by the ulnar nerve (referred to as the all ulnar hand) or only complete hand motor innervation by the UN or lastly, some median innervated muscles supplied by the UN. We present an interesting case of carpal tunnel syndrome in which there was delay in the median sensory latencies bilaterally on recording from digit II, delayed mixed nerve action potentials bilaterally. On testing the median motor nerves, the left median compound motor action potential (CMAP) was non-recordable on stimulating the left median nerve despite preserved left thenar strength and muscle bulk. On recording from the left abductor pollicis brevis (APB) while stimulating the left ulnar nerve, the CMAP was normal. Carpal tunnel syndrome was present bilaterally. The recognition of concomitant anomalies as Riche-Cannieu anastomosis affords a better characterization of the degree of carpal tunnel syndrome and avoids confusing electrophysiological interpretations.



Recent Publications

1. Harness D and Sekeles E (1971) The double anastomotic innervation of thenar muscles. *J. Anat.* 109:461-466.
2. Kim B J, Date E S, Lee S H, Lau E W and Park M K (2004) Unilateral all ulnar hand including sensory without forearm communication. *Am. J. Phys. Med. Rehab.* 83(7):569-573.

Biography

Mervat Nasry Wahba is a Neurologist in Memphis, Tennessee and is affiliated with multiple hospitals in the area, including Baptist Memorial Hospital-Memphis and Methodist Hospitals of Memphis. She has completed her Medical degree at Cairo University School of Medicine and has been in practice for more than 20 years. She is one of the 62 doctors at Baptist Memorial Hospital-Memphis and one of 52 doctors at Methodist Hospitals of Memphis who specialize in Neurology.

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