Combined Median and Ulnar Nerve Compression Neuropathy due to Lipoma at the Wrist

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The involvement of peripheral nerves in the upper limb by compression resulting in neuropathy is very common either as idiopathic or due to space-occupying lesion. The involved nerve itself may be compressed at two different levels (double crush syndrome). Although the most important cause for the compressive neuropathy is idiopathic, rarely they may be due to secondary causes.

To this date there has been no report in the English literature of a single pathology resulting in compressive neuropathy involving median and ulnar nerves. We are reporting a case of lipoma arising in the region of septum separating the carpal tunnel and Guyon canal, resulting in symptomatic neuropathy of both the nerves.

We encountered a middle-aged (49 years old) male individual presenting with severe tingling sensation involving all the five digits of nondominant hand for 4 months, without comorbid conditions. Clinical examination revealed positive

Phalen test for all five fingers within 5 seconds. There was no motor deficit; however, the patient had hypoesthesia involving the autonomous zones for median and ulnar nerves. Static two-point discrimination at the index and little finger tips was 5 and 4 mm, respectively. Magnetic resonance imaging (MRI) of the cervical spine was found to be normal. MRI of the wrist revealed lipoma (1.5 × 1 cm) arising from the medial wall of the carpal canal encroaching on both the carpal tunnel and Guyon canal. Nerve conduction and velocity study revealed increased latency for both motor and sensory modalities for median and ulnar nerves. A provisional diagnosis of combined median and ulnar neuropathy at the wrist secondary to lipoma was made.

On exploration, the lipomatous swelling arising from the medial septum of the carpal canal compressing both the nerves was detected and excised in total. Both carpal tunnel and Guyon canal were adequately decompressed. The patient

Fig. 1 Intraoperative pictures before and after excision of the lipoma.

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became symptom free on the fifth postoperative day. Patient remained symptom free till the last follow-up 6 months following surgery (►Fig. 1).

There is a great paucity of data in the literature regarding compressive neuropathy where two nerves are involved due to a single space-occupying lesion. Osei et al¹ have described a rare case of concomitant compressive neuropathy of median and ulnar nerve caused due a ganglion cyst arising from the carpometacarpal joint. Similarly, Kaymak et al² have reported a concomitant compression of median and ulnar nerve secondary to pseudotumor in the forearm caused due to hemophilia.

The incidence of subjective symptoms and objective signs in ulnar nerve distribution of hand in cases of carpal tunnel syndrome has been noted by several authors.^{3,4} The abnormalities of ulnar nerve sensory latency in the case of carpal tunnel syndrome are as high as 39.3%.

Atypical presentations such as the one described here need more extensive investigation than that is performed for a typical bilateral presentation in a female.

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