

## **Intraneural leiomyoma in radial nerve: a CASE REPORT**

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### **Introduction**

Leiomyomas arising from peripheral nerves are not common. We describe an unusual case of intraneural leiomyoma involved the radial nerve.

### **Case presentation**

A 38-year-old man presented with extensor side weakness and pain of the right forearm for 8 months. At first, weakness of right wrist extensor occurred suddenly without trauma and 1 month later pain was accompanied by weakness. On manual muscle strength test, muscle strength of right wrist extensor was 2/5, and those of extensor digitorum communis, extensor indicis proprius, abductor pollicis longus, extensor pollicis longus were zero. There was hypesthesia in first web space of the right hand dorsum. On nerve conduction study, both sensory nerve action potential and compound muscle action potential were not recorded in right radial nerve. On needle electromyography, there were abnormal spontaneous activities in right brachioradialis, extensor carpi radialis longus, supinator, extensor digitorum communis, extensor indicis proprius, extensor carpi ulnaris. There were reduced recruitment patterns in right brachioradialis, extensor carpi radialis longus, supinator and no motor unit action potential was observed in extensor digitorum communis, extensor indicis proprius, extensor carpi ulnaris. His humerus MRI image showed T2 high signal intensity at radial nerve from right brachial plexus cord level to the posterior interosseous nerve branch and about 8mm sized intraperieural nodular lesion at midshaft level with T1/T2 isointensity (Fig. 1-A). He was referred to plastic surgeon for mass excision and nerve graft. Histologically, within the nodular area there was a lesion expanding the nerve composed of relatively circumscribed, spindle and paucicellular tissue arranged in fascicles surrounding the nerve bundles and it was consistent with leiomyoma (Fig. 2). After 1 year, there were improvements in muscle strength and hypesthesia, albeit not normal. Follow-up MRI (Fig. 1-B) and electrodiagnostic study also showed interval improvements of right radial neuropathy.

### **Conclusion**

Despite the leiomyoma of peripheral nerve is rare, it could be considered as differential diagnosis in painful non-traumatic weakness suggesting mononeuropathy.

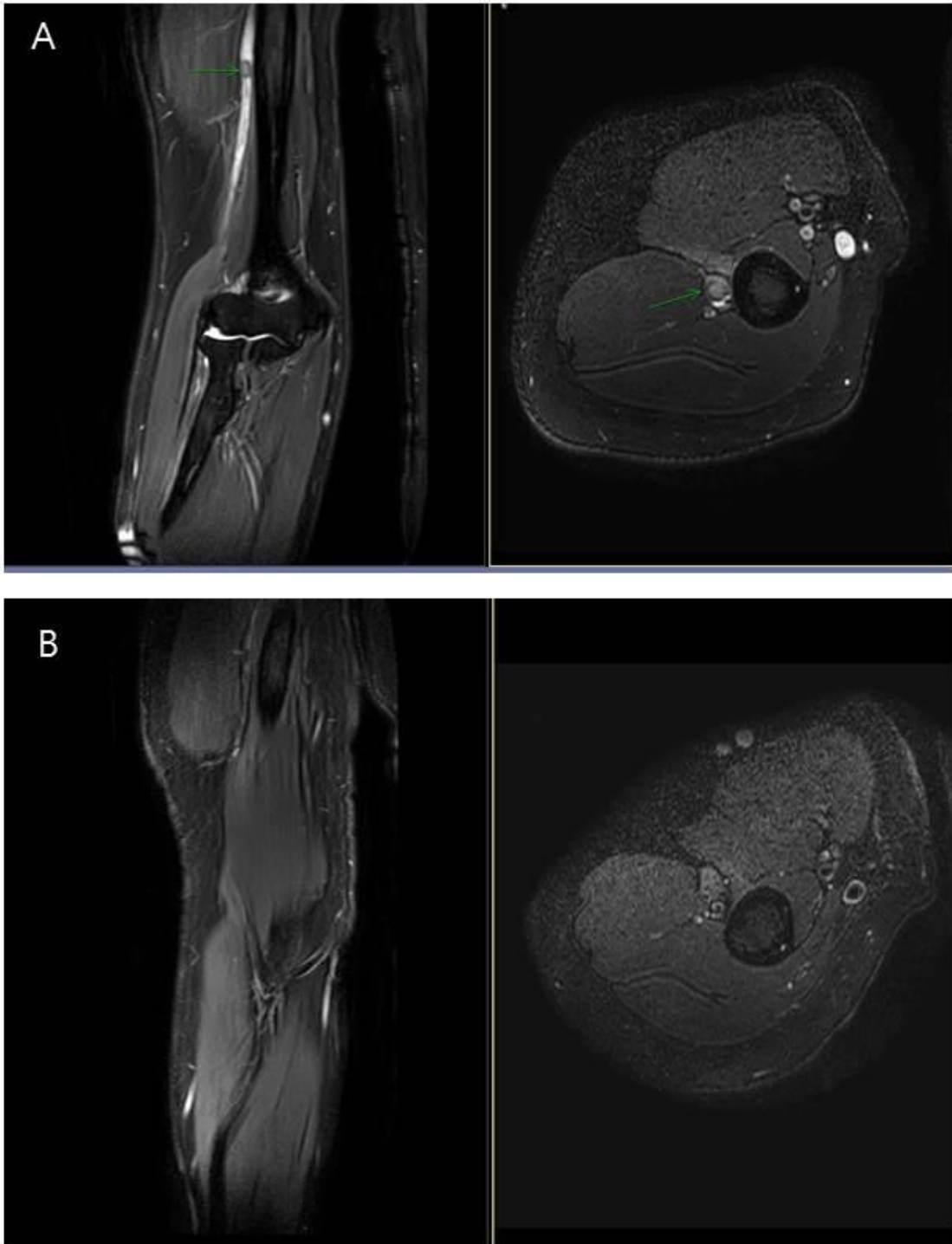


Fig1A. Initial Fat Suppressed Contrast-Enhanced T2-Weighted MRI image shows intraperineurial nodule at midshaft level of right humerus with high signal intensity of radial nerve.  
Fig1B. There is interval improvement of right radial neuropathy on follow-up Fat Suppressed Contrast-Enhanced T2-Weighted MRI image 1 year after surgery.

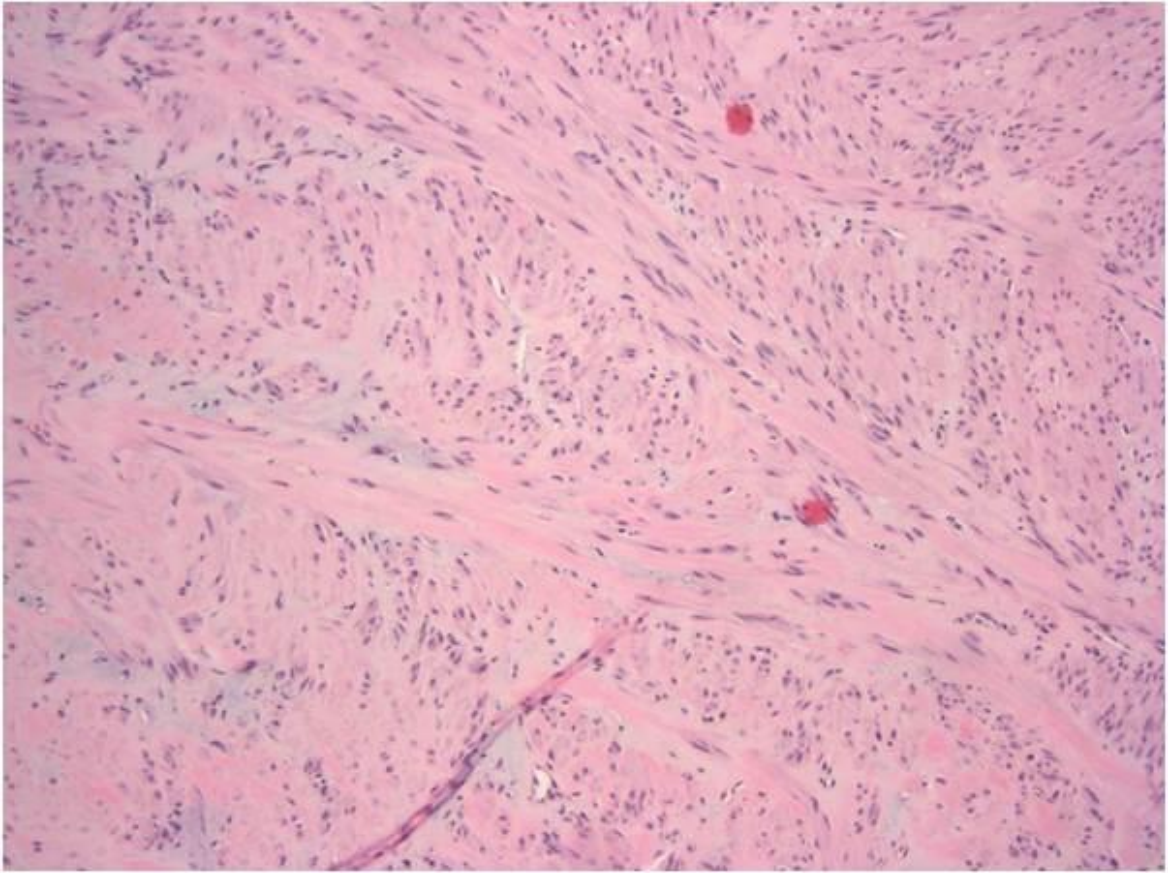


Fig 2. Microscopic appearance of the tumor.