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Typical MRI Features of Median Nerve Fibrolipomatous Hamartoma in the Wrist: A Case Report

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Abstract: **A fibrolipomatous hamartoma is a rare, benign, congenital lesion most commonly found in the median nerve. I report a case of a symptomatic fibrolipomatous hamartoma that necessitated surgical intervention in a 48-year-old man.**

Keywords: **fibrolipomatous hamartoma, nerve fascicles, median nerve.**

1. INTRODUCTION

Fibrolipomatous hamartoma of the median nerve is a rare, benign lesion that was first reported in 1953. It is usually unilateral and has no known genetic component. It is believed to be of congenital origin. While most commonly found in the median nerve, studies have reported the lesion at other sites, such as the radial and sciatic nerves. When found in the median nerve, the lesion is usually at the level of the wrist or hand.

2. CASE REPORT

A 48-year-old man presented with a 3-year history of right wrist volar swelling that was gradually increasing in size and associated with tingling sensations in his right thumb. It was smooth but tender. No associated skin changes were present, but altered sensation was experienced in the distribution of the median nerve.

Magnetic resonance imaging emonstrated fusiform median nerve enlargement The axial T1-weighted images showed a typical coaxial cable-like lesion. In Figure 1, the low-intensity structures represent thickened nerve fascicles surrounded by high-intensity structures, which represent fat.

An excisional biopsy was performed and showed a well-circumscribed lesion consisting of fatty tissue and which was intimately associated with the median nerve with a homogenous fatty appearance. Microscopic examination revealed mature fibroadipose tissue that incorporated and separated the small fascicles of the peripheral nerve.

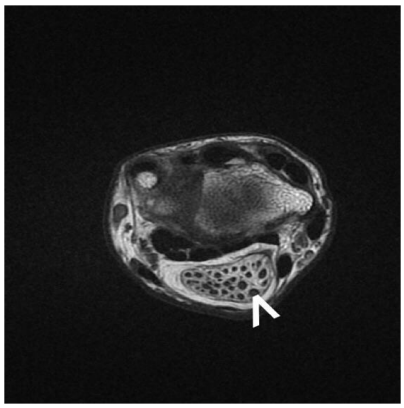

Figure.1: axial T1 image show low-intensity structures represent thickened nerve fascicles (arrow head), surrounded by fat (coaxial cable-like Lesion).

3. DISCUSSION

Lipofibromatous hamartomas (also known as intraneural lipoma, perineural lipoma, fibrolipoma, fibrofatty overgrowth) are rare congenital lesions that most commonly affect the median nerve at the level of wrist [1]. Patients mostly present with soft, slowly enlarging, painless mass on volar aspect of wrist or forearm since infancy. The neural symptoms of pain, paresthesias, weakness, carpal and cubital tunnel syndrome develop gradually due to nerve compression [2, 3]. It is frequently associated with macrodystrophia lipomatosa in approximately 20 to 66 percent of the cases [4] .When the median nerve is involved, patients may present with carpal tunnel syndrome or a slow-growing painless lump on the wrist or hand. The gold standard for investigation is MRI. The pathognomonic appearance is that of low signal nerve bundles surrounded by high signal fibrolipomatous tissue on T1-weighted images, (Cable-like appearance). [5] No other tumors have been found to have similar MRI characteristics. [6]

Managed conservatively or surgically, biopsy is often unnecessary for establishing diagnosis. Surgical intervention is recommended only for symptomatic management of this benign lesion [6] and can be performed by either debulking the fibrofatty sheath or microsurgically dissecting the neural elements.

4. CONCLUSIONS

Fibrolipomatous hamartoma is a benign condition in which MRI features are diagnostic. Intervention is necessary only when the patient is symptomatic.

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