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Median Nerve Fibrolipoma

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Abstract **Case Report**

Nerve tumors are of the order of 5% of tumors of the hand, neurofibroma and schwanoma are the most frequent. Fibrolipoma is a rare benign tumor that develops at the expense of peripheral nerves of unknown origin. macroscopically, it appears in the form of a lobulated formation with a double fatty and tissue component. Microscopically, this tumor is characterized by the presence of adipose and connective tissue infiltrating the envelopes of the nerve. surgical management involves microsurgical procedures. We report the observation of an 8-year-old patient with no particular pathological history, was referred to our department with slowly growing mass on the palmar surface of the left hand and who have been diagnosed with neurofibroma of the median nerve by imaging.

Keywords: Fibrolipoma, ulnar nerve, imaging.

INTRODUCTION

Nervous fibrolipoma or fibrolipohamartoma (fibrolipomatous hamartoma) is a benign tumor, rare, usually reaching the median nerve. It is characterized by a proliferation of fatty and fibrous elements surrounding the nerve, infiltrating the spinach and peritoneum. The signs in magnetic resonance imaging are characteristic to make the positive diagnosis of nervous fibrolipoma and thus avoid a diagnostic biopsy.

CASE PRESENTATION

An 8-year-old girl, with no particular pathological history, was referred to our department with a 10-month history of a painless, slowly growing mass on the palmar surface of the left hand. Physical examination showed a soft, mobile and non-sensitive mass, measuring approximately 2.0 × 2.0 cm. Neurovascular examinations, including the Tinel sign, were normal. Ultrasound showed a hyperechoic formation traversed by nonvascularized hypoechoic bands in color Doppler mode in continuity with the median nerve and following its path (Figures 1A and B). Magnetic resonance imaging (MRI) showed fatty signal formation (T1 and T2 hypersignal, saturated on the sequences after fat saturation) and traversed by T1 and T2 hypointense bands with a "cable" appearance on axial sections and a “spaghetti” appearance on sagittal sections (Figure 2 A, B and C).

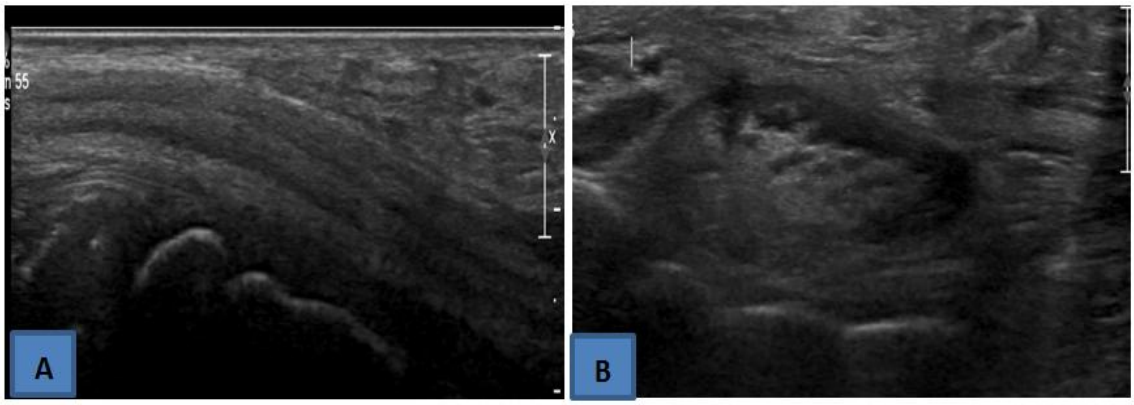

Fig 1 A et B: Ultrasound images in sagittal (A) and axial (B) sections showed a hyperechoic formation traversed by nonvascularized hypoechoic bands in color Doppler mode in continuity with the median nerve and following its path

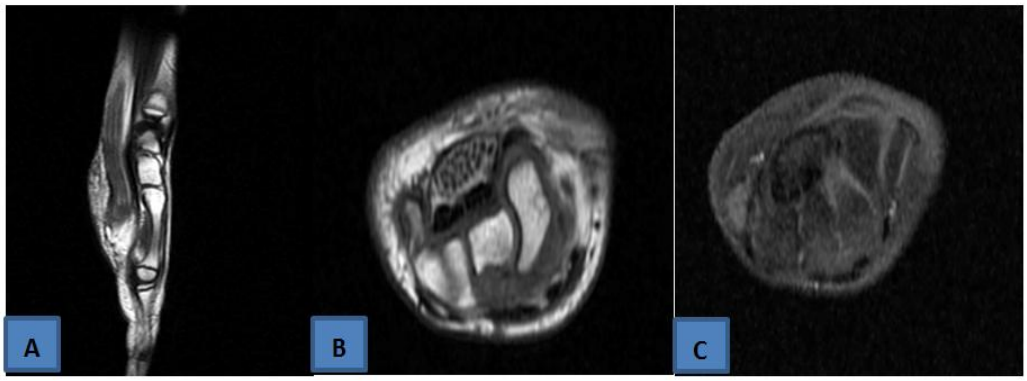

Fig 2 A, B et C : MRI of the left hand in sagittal T2 (A), axial T2 (B) and axial T1 FAT SAT (C) sections: showed fatty signal formation (T1 and T2 hypersignal, saturated on the sequences after fat saturation) and traversed by T1 and T2 hypointense bands with a "cable" appearance on axial sections and a “spaghetti” appearance on sagittal sections

DISCUSSION

Clinically, it presents as a soft, often asymptomatic, slow-growing mass occupying the palm of the hand, wrist and/or forearm that has existed since childhood. It may also manifest as pain or deparesthesia or carpal tunnel syndrome. It is associated in 66% of cases with a macrotyping that mainly affects the phalanges and corresponds to a periosteal and endosted bone affixing resulting in this aspect of localized gigantism [1-3]. The association of fibrolipohamartoma with a macrodactyly carries out lipomatous macrodystrophy, which must cause a hemangioma, lymphangioma, arteroveinous malformation or neurofibromatosis to be investigated [2-4]. More rarely, fibrolipohamartoma can be associated with ectopic calcifications of the soft parts, bone growth, subcutaneous lipomas, intramuscular fat deposits or vascular tumours [4]. Fibrolipohamartoma may be accompanied by a different bone metaplasia ("ossified" fibrolipohamartoma) than macrodactylia.

Standard x-rays may be normal or show thickening of the soft parts in connection with fibroadipose proliferation [5]. They may show, in the case of associated macrotypitylia, an hypertrophy of the bony structures with elongated and enlarged phalanges, a pinching of the joints and sometimes osteophetic constructions [2]. The ultrasound shows a hyperechogenic formation traveled by hypoechogenic [6] bands not vascularized in color doppler mode. This aspect may make the diagnosis evoke especially since the lesion is in continuity with the nerve and follows its path. MRI is the key diagnostic exam. It shows the formation of fatty signals (T1 and T2 hypersignals, saturated on the sequences after fat saturation) and traversed by bands in T1 and T2 hyposignal corresponding to enlarged nerve fibres and fibrous elements. This results in the pathognomonic MRI aspect of neurofibrolipoma with a “cable” appearance on the axial slices and a “spaghetti” appearance on the coronal slices [7]. The pathognomonic aspect of neurofibrolipoma in MRI prevents a surgical biopsy [7].

The treatment of neurofibrolipomas is highly controversial. Due to their infiltrating character, any complete tumor removal is impossible without nerve sacrifice. Nerve resection is usually contraindicated. These are inextirpable tumors [8].

CONCLUSION

The MRI aspect of nervous fibrolipoma is pathognomonic. Anatomopathological confirmation is not always necessary, especially since complete tumor removal is impossible without nerve sacrifice.

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