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Case Report

Giant fibrolipoma of the median nerve in the thenar eminence: Case report and literature review ^{☆,☆☆}

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ABSTRACT

Nerve fibrolipoma is a very rare benign tumor, corresponding to fibrofatty proliferation of the epineurium and perineurium, where most frequently, the median nerve is touched. We report the case of a 52-year-old patient who has a giant fibrolipoma of the thenar branch of the median nerve evolving at the level of the thenar eminence, an exceptional size and location for this disorder. Our case presents fibrolipoma of the median nerve in thenar eminence, a size and localization that has not been reported in the literature to our knowledge. A good dissection makes it possible to obtain total resection without neurological after-effects.

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Introduction

The majority of hand tumors are represented by benign tumors, of which only 5% develop from peripheral nerves [1]. Schwannomas and neurofibromas are the most common. Fibrolipomas are extremely uncommon benign tumors that arise from peripheral nerves. The preferred location is the median nerve [2]. Macroscopic examination, it occurs in the form of body fat formation and lobulated tissue, near nerve such as the median nerve or a branch of its division. We report the case of a 52-year-old patient who has fibrolipoma of the thenar

branch of the median nerve growing in the thenar eminence, an exceptional size and location for this disorder.

Case report

We report the case of a 52-year-old patient followed up for vitiligo for 7 years, admitted for an enlargement of the thenar eminence at the level of the right hand, growing for 2 years with major functional impact. The clinical examination (Fig. 1) revealed a mass measuring more than 5 cm, painless,

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Fig. 1 – Clinical images showing the mass at thenar lodge.



Fig. 2 – Standard X-ray of the hand showing tumor calcification of the thenar lodge.

without inflammatory signs, and without associated neurological deficit and without signs of carpal tunnel compression. The radiological assessment involved intratumor calcification on the standard radiographs (Fig. 2) and an adipose signal image on the magnetic resonance imaging (Fig. 3). An excisional biopsy was performed by direct surgical approach (Fig. 4), and the macroscopic appearance was in favor of a 6 cm long-axis mass encapsulated with adipose fibrous consistency, at the expense of a nerve branch that comes from the thenar branch of the median nerve, and whose anatomopathological study was in favor of fibrolipoma (Fig. 5). The progression was satisfactory, without local recurrence or subsequent neurological disorders (Fig. 6).

Discussion

According to the 92-case literature review, peripheral nerve fibrolipoma is an uncommon and benign tumor that most fre-

quently affects young individuals, with an average age of 21 years and a female preponderance in 56.52% of cases [3].

The median nerve is the most common location of peripheral nerve fibrolipoma. The location at the level of thenar eminence is a historical and an exceptional form. The classic manifestation is that of a chronic progressively increasing swelling, with or without associated neurological signs. The typical appearance on the magnetic resonance imaging currently allows us to confirm the diagnosis and to avoid any aggressive surgical biopsy [4]. The surgical attitude should be as conservative as possible, including neurolysis, aponeurotomy with biopsy, and carpal tunnel release in the case of carpal tunnel syndrome. Radical resection may be indicated in the case of complete preoperative deficit. In the case of our patient, the results of the resection were satisfactory, especially without postoperative neurological deficit [2,5].

Small asymptomatic masses that have been diagnosed through history and physical examination can be monitored without intervention. However, surgical removal is indicated

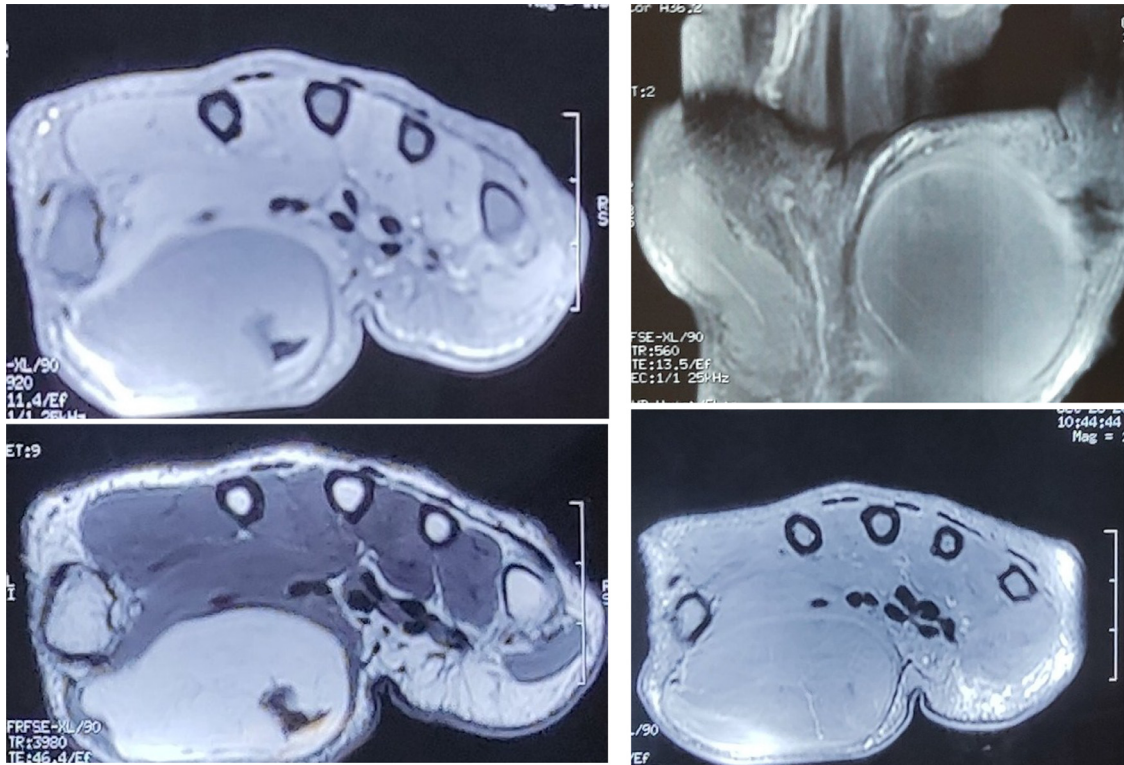


Fig. 3 – MRI showing the underaponeurotic mass of the thenar mass.

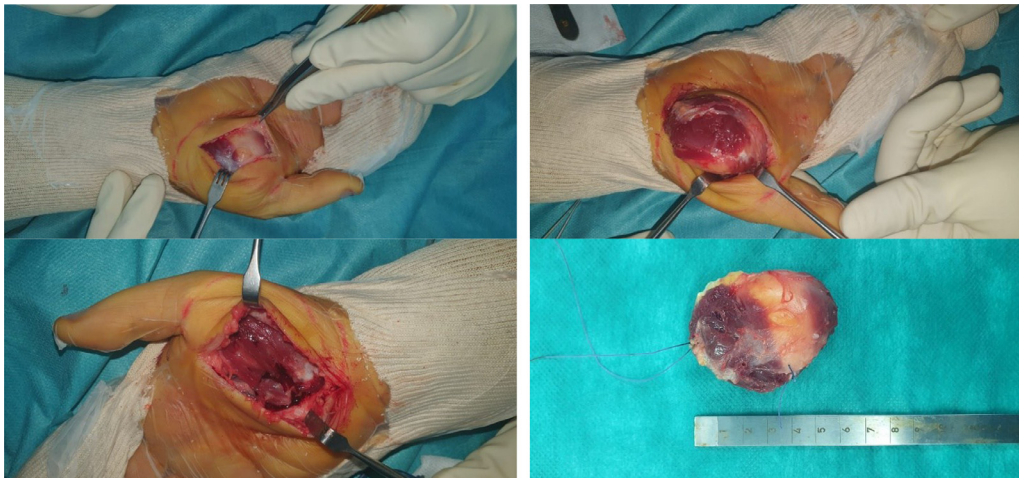
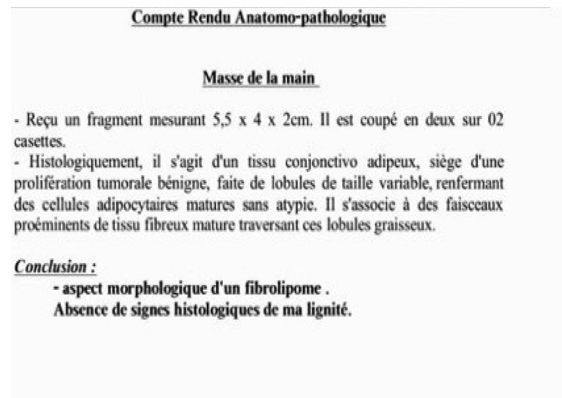


Fig. 4 – Intraoperative images showing the removal of the mass.

in the presence of pain, functional disability, compression neuropathy, or an aesthetic problem. The anatomical organization of the hand has a complexity, and we should conduct a careful dissection. Fibrolipoma is usually surrounded by a thin, fibrous capsule, which allow the entire mass to be delivered. Appropriate marginal excision will allow complete resolution of symptoms over time, including restoration of sensitivity in the case of nerve compression. More rarely, in patients with carpal tunnel syndrome, significant mass extension makes difficult the tumor resection exposing to high

risk of postoperative neurologic sequela. For these complex figure cases, carpal tunnel release without tumor excision is a good approach to relieve symptoms [6]. Alternative therapeutic modalities of tumor removal, such as endoscopic excision, aim to reduce scars. Along with that, intralesional and mesotherapy injections of phosphatidylcholine and deoxycholate were used to decrease the size of the mass. Nevertheless, monitoring or surgical resection without intervention remains the most commonly used therapeutic modalities.

**pathology report****hand mass**

we received a fragment measuring 5.5cm*4*2cm

he is cut in half on two tapes

it is an adipose connective tissue contains a benign tumor proliferation, with lobules of variable size, with mature adipocyte cells without atypia.

it associates with prominent bundles of mature fibrous tissue which crosses these fatty lobules

conclusion:

appearance of a fibro lipoma without signs of malignancy

Fig. 5 – Histological examination results.



Fig. 6 – Clinical results after 1 year of follow-up.

Patient consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the editor-in-chief of this journal on request.

Acknowledgments

We thank our colleagues who provided insight and expertise that greatly assisted the research, although they may not agree with all of the interpretations of this paper.

Conclusion

Fibrolipoma of the median nerve is a rare form. It may present late with advanced signs of neurological compression. Our case presents fibrolipoma of the thenar branch of median nerve, a size and localization that has not been reported in the literature to our knowledge. A good dissection makes it possible to obtain total resection without neurological after-effects.

Ethics approval

Our institution does not require ethical approval for reporting individual cases or case series.

Authors' contributions

All authors contributed to the conduct of this research and read and approved the final version of the manuscript.

Availability of data and materials

Not applicable.

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