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Carpal Tunnel Neurofibroma

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Case Report

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Abstract: Tumors of the peripheral nerves are rare and poorly known. Diagnosis is rarely done before the procedure. Surgical treatment is difficult, and may cause irreversible nervous damage if misbehaved. As a result, imaging and pathology have an important role in the management of these tumors. We report a case of isolated wrist neurofibroma revealed by carpal tunnel syndrome.
Keywords: Neurofibromas, Carpal Tunnel Syndrome, Surgery, Anatomy Pathology.

INTRODUCTION

Rarely isolated, most often associated with a Recklinghausen disease, the neurofibroma may be in the form of a cutaneous tumor (molluscum fibrosum) which is a nerve tumor or a neurofibroma itself. Neurofibromas account for between 10% and 20% of peripheral nerve tumors. They occur without predominance of sex in adults between 20 and 30 years.

CASE REPORT

This was a 45-year-old woman with left carpal tunnel syndrome. Associated with a mass of 2 cm, painless, immobile and renitente with a sign of Tinnel positive.

MRI showed 3 ductal processes fusing with the tennary branch of the median nerve hypodense in t1, hyperdense in t2 and enhancing after gadolinium injection.

The peroperative exploration had objective the 3 masses actually white mother-of-pearl, hard fusing with the tenar branch of the median nerve (Figure 1).

And their exerere forced us to sacrifice some nerve fibers of the tenaric branch of the median nerve (Figure 2).

The anatomopathological examination had objectified the appearance of a neurofibroma. The decline at six months showed paresthesia in the territory of the tenary branch of the median nerve with no locoregional recurrence.

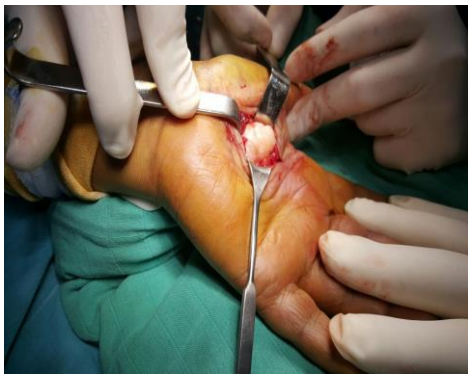

Fig-1: Per-opérative view of neurofibroma

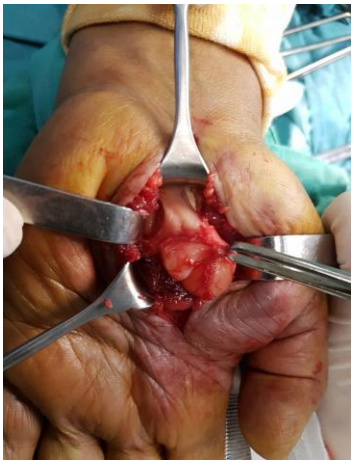

Fig-2: Neurofibroma hard fusing with the tenar branch of the median nerve

DISCUSSION

Between 60 and 90% of neurofibromas (all forms combined) occur in patients free from neurofibromatosis type 1 (NF1 or Von Recklinghausen disease) [1].

Several forms of neurofibroma exist: - the solitary localized neurofibroma represents 90% of these forms and in the majority of cases is not associated with an NF1 [2, 3] - the plexiform neurofibroma is pathognomonic of NF1. It occurs frequently in children and precedes the appearance of cutaneous neurofibromas. It morphologically corresponds to a more or less long segment of tortuous dilatation of a nerve and its branches, realizing the aspect of bundle of string [4, 5]. These tumors vary in size, and if left to evolve, become monstrous [6]. Classically located near folds of flexion, these swellings can sit on any nerve path.

Clinically the palpation should be careful, at the area incriminated by the patient, but also on the path of the main nervous trunks. It can perfectly identify the lesion, possibly to evoke a precise location on a nervous trunk, and seek the presence of a sign of Tinel during percussion. This sign is noted in 100% of palpable peripheral nerve tumors (NPT). A palpable ovoid swelling associated with a Tinel sign is until a TNP is demonstrated. [4, 7] The functional symptomatology is variable proportional to the volume of the tumor. Often absent, elsewhere marked by pain and distal signs such paresthesia or deficit signs that often take the appearance of neuralgia [1, 8].

The general examination should include inspection of the entire skin surface to identify lesions in favor of NF 1 type (coffee-milk spots, subcutaneous neurofibromas, axillary or inguinal lentigines) and the search for personal or family history of Neurofibromatosis [5]. On palpation the neurofibromas are firm, heterogeneous, sometimes giving an encephaloid sensation, the percussion can reveal a sign of Tinel, the skin next to it is often thinned.

Ultrasound shows the intimate relationship between the tumor and the nervous trunk. It is unreliable in the diagnosis of nature between schwannoma and neurofibroma, or between benign and malignant tumors. The scanner provides three types of information (the location in contact with a nerve trunk, the general appearance of the lesion, iodized contrast enhancement is inconsistent). Magnetic resonance imaging, which is more informative, is the test of choice for the diagnosis of peripheral nerve tumors [4, 8-10]. Neurofibromas are classically considered as non-extirpable tumors. The ideal would be to perform complete excision of the tumor, without nerve damage. But it is known that the neurofibroma is often adherent to surrounding tissues, is not encapsulated, and often includes a number of nerve fibers [4, 11]. Some authors have proposed a block resection of the tumor and the supporting trunk, associated with an epi neural anastomosis or a fascicular graft at the same time [1, 4] others have advocated the use of the operating microscope [11, 12].

CONCLUSION

It is imperative to remove any neurofibroma suspected of malignancy, while benign lesions should be operated only if they are troublesome.

CONSENT

The patient has given their informed consent for the case to be published.

COMPETING INTERESTS

The authors declare no competing interest.

AUTHORS' CONTRIBUTIONS

All authors have read and agreed to the final version of this manuscript and have equally contributed to its content and to the management of the manuscript.

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