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Carpal Tunnel Lipoma: A Rare Case Report

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Abstract **Case Report**

Palmar compressive lipoma of the median nerve is relatively rare. It is often expressed as a tumor syndrome compressing the flexor tendons and compressing the median nerve. We present the case of a patient who initially consulted for a carpal tunnel syndrome associated with a mass in the wrist that progressively increased in size. We discuss the unusual character of the localization, the interest and the difficulty of an excision of this type of lesion.

Keywords: median nerve, lipoma, carpal tunnel, surgery.

INTRODUCTION

Lipoma are very rarely localized in the hand. The localization in the carpal tunnel remains exceptional. Its diagnosis is often easy, but may require further exploration.

We report in this case a compressive form of the median nerve, not invading the tendon structures of the right hand.

MATERIALS AND METHODS

A case of palmar lipoma of the right hand is reported in a 55-year-old woman who consulted us for paresthesias in the right hand with difficulty in grasping, which had been evolving for two years and had been worsening for one month, with no intrinsic or extrinsic motor deficits. The clinical examination revealed a swelling well limited to the anterior aspect of the wrist, mobile, soft and painless. There was no cutaneous pain in the area. The vascular examination of the fingers was without abnormality.

The standard radiograph did not reveal any pathological image. An ultrasound was performed, orienting the diagnosis to a lipoma of the wrist, well limited, non vascularized on Doppler. An EMG of the left upper extremity was in favor of a sensitive compression of the left median nerve from its passage to the left wrist.

Intraoperatively, the median nerve was found to be suppressed by a yellow mass that fused into the carpal tunnel. The encapsulated tumor was carefully dissected from the median nerve, which was pushed back without being invaded by the mass. The size of the tumor after monobloc excision was 5 cm in diameter, well limited, non vascularized, and a priori without signs of malignancy.

The anatomical pathology result confirmed the diagnosis of lipoma. The evolution was marked by the resolution of sensory disorders. At 12 months, there was no recurrence of the tumor and the function of the hand was excellent, with disappearance of the nervous disorders of the carpal tunnel syndrome.

DISCUSSION

Benign tumor pathologies of the hand are frequent and mainly represented by arthrosynovial and paratendinous cysts. Other etiologies are rarer: among these, lipomas constitute only 1 to 3.8% [1,2] of benign tumors of the hand.

Lipoma is a tumor developed from mature adipocyte cells. Most often encapsulated and sometimes infiltrating, it sometimes poses difficult problems of differentiation from adipose hyperplasia. Localization in the hand and wrist remains rare - 5% of cases [2].

Depending on its location, the lipoma may induce nerve compression, carpal tunnel syndrome, compression of the ulnar nerve in Guyon's canal [3], digital nerves [4], or even a jerking finger [5].

Clinically, it is often painless and usually results in the palpation of a soft, regular and mobile

tumor. In the wrist, the appearance of signs of vasculo-nervous compression leads the patient to seek medical attention [6-8].

Ultrasound can sometimes be used to evoke the diagnosis by finding an echogenic mass on the anterior aspect of the wrist, without vascular character. Electromyography (EMG) and nerve conduction measurements show prolonged sensory latency in the median nerve territory of the wrist [9].

The gold standard for these tumors is MRI, which is the most interesting diagnostic tool and allows therapeutic planning. It shows a lobulated mass, including septa with a T1 hypersignal and a T2-weighted iso signal [10]. Pathological examination remains the only means of diagnostic affirmation.

In the wrist, marginal excision is the treatment of choice for benign lipomas. Dissection and identification of vasculo-nervous elements must be done with care to avoid iatrogenic lesions. Local recurrences are exceptional. Histology should eliminate the diagnosis of well-differentiated liposarcoma, which is the main differential diagnosis [11].

Fig-1: Intraoperative image of the lipoma measuring 5 cm in long axis

Fig-2: Intraoperative image of the median nerve under the lipoma

Fig-3: Intraoperative image after single-block removal of the mass.

ACKNOWLEDGEMENT

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.

CONCLUSION

Wrist lipoma remains an exceptional tumor location. The presence of signs of nerve compression requires a well-established etiological work-up. Histology after complete removal of the tumor remains imperative to confirm the diagnosis and to eliminate a malignant tumor, in particular, a liposarcoma.

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