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Case Report

A supraorbital nerve Schwannoma: a case report

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ABSTRACT

Schwannomas are encapsulated tumors that originate in the peripheral this frequently affect sensory nerves, benign and with low incidence, characterized by a tumor under the skin, usually encapsulated, composed of well-differentiated neoplastic Schwann cells. They are the most common benign tumors of peripheral nerves of the head and neck region and in the extensor aspects of the limbs, but also in the spinal and cranial nerves, especially the vestibular nerve. We present the case of a female patient with schwannoma of the supraorbital nerve with neurological involvement associated with a progressively growing mass in the frontal region of the forehead. We show the clinical diagnosis process and the surgical treatment instituted to perform complete resection and functional preservation, with a definitive anatomopathological diagnosis of supraorbital schwannoma. Due to the infrequency of this pathology, we also perform a review of the literature on the subject.

Keywords: Schwannoma, Neurinoma, Schwannoma trigeminal, Neurogenic tumor

INTRODUCTION

Schwannomas are benign, well-defined neural sheath tumors, usually attached to peripheral nerves, histologically consisting of a clonal population of Schwann cells, which often undergo cystic and degenerative changes.

The incidence is sporadic in most cases; although some are associated with NF2, schwannomatosis, or Carney complex and rarely secondary to radiation.[1]

Schwannomas are usually solitary tumors that often affect small peripheral nerves in the head and neck regions, and on flexor surfaces of the extremities.

They constitute approximately 5% of benign soft tissue neoplasms.[2] Their origin comes from the transformation zone between central and peripheral myelin: Obersteiner-Redlich zone.[3]

They mainly affect peripheral nerves, with 50% located in the head and neck. The most frequently affected cranial nerve is the VIII pair, followed by the V pair, while those affecting the facial nerve are even less frequent.[4]

CASE REPORT

A 35-year-old female patient, with no personal or family history of interest, came to the clinic due to a 2-year history of clinical symptoms.

She presented a progressively growing tumor at the frontal level of the forehead, in addition to a feeling of oppression and supraorbital neuralgia.

Upon physical examination, she presented a firm, spongiform, non-mobile tumor, mild pain on palpation, and a feeling of paresthesia.

Given the diagnostic suspicion of a probable lipoma in the frontal region, she was scheduled for resection with primary closure.

It was decided to approach the tumor with an incision transverse to the lesion, following the principle of respecting the lines of tension and relaxation of the skin (RSTL).

With the patient in a supine position, and after asepsis and antisepsis, local anesthesia was applied, and latency was allowed. An incision was made with a scalpel, blunt dissection of subcutaneous tissue, and frontalis muscle until the tumor was delimited. A tapered tumor was identified and upon manipulation, paresthesia was felt and the sensation radiated to the territory of the lateral branch of the supraorbital nerve. Complete removal of a tumor of approximately 3×2 centimeters was achieved.

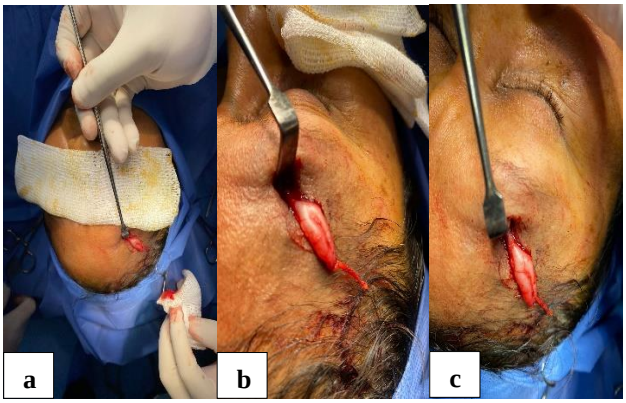

Figure 1 (a-c): Intraoperative approach, with dissection and excision of a lesion at the level of the supraorbital nerve, which has a tapered appearance and an approximate measurement of 3×2 centimetres.

Primary closure was performed with subcutaneous stitches with 4-0 Nylon, appropriately facing the skin. A sterile dressing was placed. The patient had an adequate postoperative period, and stitches were removed 7 days later with adequate healing.

Follow-up was carried out for three months, with adequate evolution and complete recovery of sensory function. Finally, the histopathological report mentions that it was a schwannoma.

We maintained close monitoring for six months, during which the patient mentioned complete recovery of sensitivity in the area, as well as preservation of facial movements, such as frowning, raising the eyebrows and closing the eyelids.

DISCUSSION

Schwannomas are tumors originating from Schwann cells, in the myelin sheath and starting from the Obersteiner-Redlich zone.[5]

They mainly affect peripheral nerves, their location in half of the cases is in the head and neck, affecting primarily the VIII cranial nerve (vestibulocochlear), followed by the V cranial nerve (trigeminal), and in the least cases the VII cranial nerve (facial).[6]

Their growth is slow and their symptoms are non-specific, making them one of the least considered differential diagnoses. Despite their low incidence, they are the most common benign tumors of peripheral nerves.[7]

Due to their low incidence, little has been described about their approach and management, since it is an unlikely finding when performing resections of tumor lesions on the face.

The natural history of the disease of these tumors is generally asymptomatic. Therefore, it is important to assess the presence of symptoms as a decisive basis when offering surgical treatment, since these interventions involve a risk of nerve injury.[8]

CONCLUSION

Despite the low incidence of Schwannomas, they should always be considered as a differential diagnosis for facial tumors.

These tumors can originate from any nervous part of the body, and early identification is difficult due to vague symptoms, such as those identified in the present clinical case. The location and size will determine the characteristics of the symptoms, which in a torpid evolution of the disease may include compressive neuropathy.

Anatomical knowledge of the region should be the guideline for determining surgical planes, increasing the chance of complete resection and functional and aesthetic recovery in the postoperative period. The treatment of benign schwannomas is the removal of the tumor with surgery, which usually results in complete and rapid relief of symptoms.

There are many techniques for both upper and lower eyelid reconstruction, and the choice will depend largely on the magnitude of the defect created and its location, as well as the histology of the lesion and other aspects such as the age of the patient.

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