Case Report

Schwannoma of Ulnar Nerve. About a Case and Literature Review

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Abstract

Schwannoma is one of the tumors isolated from the peripheral nerves, developing at the expense of Schwann cells of the nerve sheath. Rare and generally benign, the lesion sits preferentially in the upper limb, especially at the extension surfaces of joints. We report here the case of a 31-year-old patient who consults for a swelling of the medial aspect of the left elbow, appeared about 5 years ago, initially painless but gradually became very sensitive. Standard radiography was strictly normal and the ultrasound evoked lipomatous swelling. Surgical excision was performed and anatomopathological examination of the surgical specimen concluded Schwannoma. Post-surgery follow-ups were satisfactory, with a disappearance of symptoms at 12 months of follow-up.

Key Words: Schwannoma; Nerve Tumor; Ulnar Nerve

Introduction

Tumors isolated from the peripheral nerves are rare and generally benign [1]. Schwannoma is one of those lesions that develops at the expense of the nerve sheath's Schwann cells. It is the most common benign tumor of the peripheral nerves [2] and it preferentially sits on the upper limb [3], particularly on joints extension surfaces [4]. Its treatment is surgical.

We report a case of Schwannoma developed at the expense of the ulnar nerve next to the elbow joint.

Case Report

Ms. B.C., age 31, consulted for swelling of the medial aspect of the left elbow appeared about 5 years ago, initially painless but very sensitive for a couple of months now. On physical examination we have found a tumor of soft consistency, about 3 cm in diameter, not adherent to the deep plane, painful to palpation with a positive Tinel sign. There were also tingling, extending from the forearm to the last two fingers of the hand. The paraclinical examinations were carried out: the standard radiography (Figure 1) was normal, the ultrasound evoked a lipomatous swelling (Figure 2). The indication of a surgical removal was questioned.

We have realized a cutaneous section centered on the tumefaction; the careful crossing of the plan under cutaneous allows the discovery of a clear yellow tumor of aspect wrapped by the girdle of the nerve ulnaire. We proceed with accuracy to the opening of this girdle and a careful dissection allows the delivery of the tumor without burglary of nerve fibers.

The surgery specimen is sent for anatomopathological examination. The immediate post-surgery course was marked by persistent dysesthesia at the surgical site, the forearm and the hand. Anatomopathological examination of the operative specimen found a Schwannoma. A follow-up of 12 months after a regular follow-up, we have noted a complete disappearance of all symptoms.

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Figure 1: Elbow radiography

Figure 2: Ultrasound

Figure 3: Peroperative view
Discussion

Schwannoma is a tumor most often found in the thorax but occasionally described to be at the extremities of the pelvic limb [3,5]. Multiples schwannomas of upper limb and familial schwannomatosis have been reported [6,7]. Joints surfaces are the preferred areas [8]. According to data from the literature, the median nerve is the most often affected [9]. The discovery of the tumor in the sheath of the ulnar nerve in our observation is not exceptional; several reports mention it as the second most often reached nerve after the median nerve [5].

All ages can be affected, with a peak between 30 and 50 years [10], which corresponds to our case. Delay between appearance of the tumor and surgical management is very variable, depending on the aesthetic discomfort and various disorders.

There are no clinical signs specific to schwannoma development. However, some symptoms such as pain and paresthesia are almost always found in literature, in varying proportions. Also, an equivalent of the Tinel sign in the affected nerve territory is reported in 99% of schwannoma cases described [11].

The Magnetic Resonance Imaging (MRI) is the complementary examination of choice in suspected cases of schwannoma. While diagnostic errors are possible despite MRI [12,13,14]. This examination in conjunction with clinical signs is particularly useful in the diagnosis of schwannoma. We did not use it because of its unavailability at the time throughout the national territory and besides the installation of a medical imaging center is quite recent in the city of Cotonou. Other complementary tests, such as plain X-ray and electromyography (EMG), are not contributory [15].

According to Dubert, schwannoma surgery must be done under a microscope [14]. It is thus possible to enucleate the tumor after epineurotomy and gentle dissection of the tumor without injury to the nervous fascicle and without post surgery deficit [4,12,16]. Under the conditions which are ours, the removal of the tumor was done without microscope and without a surgical magnifying glass. However, the dissection was cautious and the surgical procedure went without difficulty.

Although removal under microscope guaranteed good results, several authors have reported cases with onset of postoperative neurological deficit [15]. According to Adani et al. [17], these signs regress completely after a maximum period of twelve months. As far as our case is concerned, we have noted no neurological disorder at a follow up of a one year post surgery, even though surgical removal was done without a microscope. No signs of recurrence were also observed. Recurrence is exceptional in schwannoma cases isolated from peripheral nerves [2,18].

Conclusion

Schwannoma is a benign tumor developed at the expense of cells of the sheath of the peripheral nerves. Pre-surgery diagnosis is not always obvious despite a bundle of clinical and imaging arguments; only anatomo-pathological examination provides certainty. removal is best done under the microscope and immediate evolution can be marked by the persistence or occurrence of neurological disorders, which are generally reversible after 12 months on average.

Compliance with Ethical Standards

Ethical approval: This article does not contain any studies with animals performed by any of the authors.

Informed consent: Informed consent was obtained from the patient included in the study.

Reference


