Schwannomas are rare benign tumors posing differential diagnosis problem with carpal tunnel syndrome if it presents complications such as numbness and tingling or neurofibromatosis especially when schwannomas are multiple. We present a case of woman presenting swelling of the palmar aspect of wrist with functional signs guiding the clinical diagnosis of carpal tunnel syndrome. On MRI the mass was well encapsulated to sharp limits without any peritumoral edema. The diagnosis was confirmed at histological exam after surgical intervention. However, It is essential to have a presumption diagnosis of schwannoma oriented by imaging such as ultrasound and especially MRI to have an idea on the dissection of the tumor, the schwanna being easily resectable with easy dissection from the nerve fibers that surround it, while neurofibromatosis requires sacrifices of nerve fibers due to difficult dissection. Only surgical resection is considered a curative treatment. Generally, there are no sequelae of postoperative paresthesia, long-term recurrence or degeneration.

**Keywords:** Schwannoma, median, nerve, neurofibromatosis.
intermediate signal on the images T1-weighted and hyperintense signal on T2-weighted fat images, the mass was well encapsulated to sharp limits without any peritumoral edema. Total excision through a tumor-centered longitudinal incision was performed with microsurgical techniques that consisted of opening the epineurium longitudinally in the direction of the incision, and carefully dissecting the tumor from adjacent nerve fibers without traumatizing the median nerve (figure 3). During the operation the mass was well encapsulated without any invasion of the adjacent tissues, sitting under the flexor tendons in a position slightly eccentric to the median nerve (figure 1 and 2). The anatomopathological examination confirmed the diagnosis of schwannoma by demonstrating the alternations of the Antoni A and Antoni B areas. The patient presented immediately after the operation with paresthesias which disappeared after a few days. At the 6th month of follow-up, the patient had no sequelae of paresthesia and was able to resume her work.

Fig-1: Operative schwannoma aspect of median nerve

Fig-2: Schwannoma during dissection

**DISCUSSION**

Schwannomas are rare benign tumors [7]. Generally solitary however, they can be multiple in the setting of sporadic schwannomatosis [9]. That should be differentiated from familial neurofibromatosis type 1 [8]. The rarity of these lesions and in particular the schwannoma of the median nerve makes their diagnosis difficult and can be confused with carpal tunnel syndrome in consultation given the common clinical signs such as numbness of the sensory territory of the median nerve, the sign of Tinel and Phanel positive especially if the tumor grows and at a relatively fast rate because its slow growth model allows adaptation of nerve function to the effects of pressure [10]. Otherwise at an early stage it presents as an isolated painless swelling without any accompanying signs. Neural tumors with motor deficits such as thenar muscular atrophy or loss of dexterity in the hand are considered signs of malignancy, although motor deficits can also be present in schwannoma. Palpation is often painless or slightly tender, often of a firm or hard consistency. The advantage of ultrasound over MRI is that it provides dynamic images in flexion and extension providing information on the mobility of the tumor relative to adjacent tissues [13]. MRI with injection of gadolinium is the main complementary examination to aid in the preoperative diagnosis. The target signs according to Koga et al. are the difference between central and peripheral contrasts. The tumor is often eccentric and encapsulated without invasion of surrounding tissue [12]. Preoperative diagnosis is important in the sense of providing a preliminary understanding of the nature of the dissection of the tumor from the rest of the nerve, for example, schwannomas are easily dissected from the rest of the nerve fascicles, which is not the case for neurofibromatosis which cannot be resected without inducing iatrogenic nerve damage. The excision-biopsy with pathological examination confirms the diagnosis, the main characteristic of which is the alternation of the Antoni A and Antoni B areas associated with a strongly positive S-100 protein on the staining and which is
specific for schwannomas and excluding neurofibromas [11]. In addition, we were able to reveal a real capsule encompassing the tumor. Surgical excision is considered to be the only effective treatment [3, 14]; however its indication remains controversial [15, 16]. The rules of microsurgery should be followed to avoid damage to nerve fibers during dissection, as careful dissection without bloodshed [2] and the use of microscopic magnification. Paresthesia is the main immediate postoperative complication [17]. The recurrence rate is low [11].

**CONCLUSION**

In our study, we present the case of isolated schwannoma from the median nerve in zone 5. Schwannomas are rare peripheral nerve tumors that are difficult to diagnose preoperatively. Its clinical features are a small, isolated, painless swelling along the path of a peripheral nerve, in this case it was median nerve. The MRI being the main complementary examination helping in the preoperative diagnosis, Surgical resection is the only curative treatment, it must be subject to the rules of microsurgery to avoid iatrogenic lesions of the nerve.

**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.

**REFERENCES**