

Perineurioma of the posterior interosseous nerve: surgical treatment

Perineurioma do nervo interósseo posterior: tratamento cirúrgico

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Intraneural perineurioma is a benign tumor that occurs in less than 1% of peripheral nerve tumors; no more than 90 cases have been reported^{1,2}. Tumorous lesions of the posterior interosseous nerve (PIN) have rarely been described³⁻⁵.

An 18-year-old woman presented with a longstanding history of spontaneous progressive weakness in the PIN

distribution (Figure 1). Ultrasonography and MRI studies (Figure 2) showed a nodular lesion in the PIN, measuring 1.0 cm at its greatest diameter. At surgical exploration a tumor (Figure 3) involving all the nerve fascicles was entirely resected. The nerve was repaired by termino-terminal neurorrhaphy. Figure 4 shows the histological examination.



Figure 1. Wrist extension partially preserved and deviation of the hand to the radial side. There was no finger extension.



Figure 2. (A, B) MRI: heterogeneous oval lesion, with slight post-contrast enhancement, located in the PIN, measuring 1.0 cm at its greatest diameter; (C) Ultrasonography: nodule (N) located within the PIN.

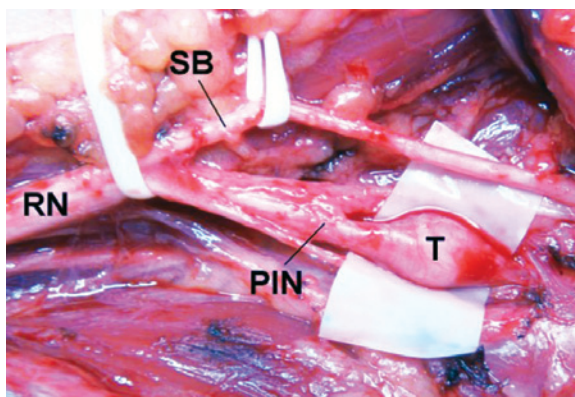


Figure 3. Intraoperative view of the tumor involving all the fascicles of the PIN. PIN: posterior interosseous nerve; RN: radial nerve; SB: superficial branch of the radial nerve; T: tumor.

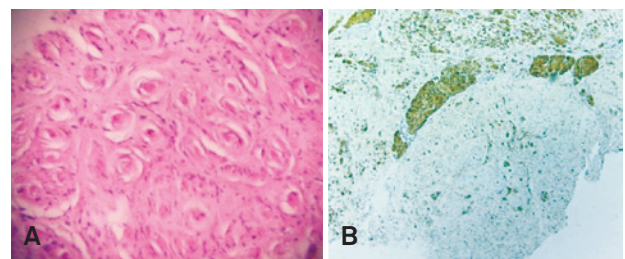


Figure 4. (A) Histological slide (H&E stain) showing diffuse pseudo-onion-bulb leaflets and thinly myelinated fibres at the centre of them; (B) Schwann cell preparation (S-100 protein) on immunohistochemistry demonstrates reactivity of the myelinated fibres at the centre, and absence of reactivity, of the surrounding pseudo-onion bulbs. Furthermore, epithelial membrane antigen (EMA) was positive, confirming perineurial origin. These findings, considered together, are diagnostic of perineurioma⁵.

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