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Deep cervical schwannoma revealed by mild pharyngeal discomfort: a case report

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AUTHORS AND AFFILIATION

ElMehdi Harbili[1], Ahmed Rouihi[1], Mohamed Zalagh[1], Leila Benbella[2], Mustapha Azakhmam[2], Saloua Ouraini[1], Bouchaib Hemmaoui[1], Fouad Benariba[1], Noureddine Errami[1]

[1] Department of Otorhinolaryngology and Head and Neck Surgery, Mohammed V Military Teaching Hospital, Rabat, Morocco.

[2] Department of Pathology, Mohammed V Military Teaching Hospital, Rabat, Morocco.

Corresponding author: Dr. El Mehdi Harbili

ABSTRACT

Deep cervical schwannomas are rare benign tumors originating from Schwann cells, and vagal nerve involvement is exceptional. We report the case of a 30-year-old woman presenting with progressive dysphagia and mild pharyngeal discomfort. Cervical MRI revealed a well-defined right parapharyngeal mass displacing the carotid artery anteriorly and the internal jugular vein posteriorly, suggestive of a vagal schwannoma. The tumor was completely excised through a combined transcervical and transparotid approach, with preservation of the main vagal trunk. The postoperative course was uneventful, with no neurological deficit. Histopathologic examination confirmed a benign vagal schwannoma. After six months of follow-up, the patient remained asymptomatic with no evidence of recurrence. This case highlights the importance of early diagnosis, precise preoperative imaging, and meticulous microsurgical dissection to ensure functional nerve preservation and optimal surgical outcomes.

KEYWORDS :

Schwannoma – Vagus nerve – Parapharyngeal space – Cervical surgery – Case report

MAIN ARTICLE

INTRODUCTION

Schwannomas are benign peripheral nerve sheath tumors arising from Schwann cells. Their occurrence in the parapharyngeal space is rare, accounting for less than 1% of all cervical tumors. Vagal schwannomas represent a particularly uncommon subset and are frequently diagnosed late because of their slow growth and non-specific symptoms. Imaging, particularly MRI, plays a key role in diagnosis and surgical planning, while histopathology confirms the benign neural origin. We report a case of a deep cervical schwannoma of the vagus nerve revealed by mild pharyngeal discomfort, emphasizing the diagnostic challenges and the importance of a nerve-sparing surgical approach.

PATIENT AND OBSERVATION

A 30-year-old woman with no medical history presented with progressive dysphagia and right-sided pharyngeal discomfort evolving over eight months. There was no hoarseness, otalgia, or cervical pain. One year earlier, she had undergone tonsillectomy for oropharyngeal bulging, retrospectively attributed to an undiagnosed parapharyngeal mass.

Clinical examination revealed a deep, firm, non-tender right lateral cervical swelling, mobile transversely and non-inflammatory. Endoscopic examination showed a right lateral oropharyngeal bulge with slight deviation of the soft palate, but normal laryngeal mobility **(figure1)**.

Cervical MRI demonstrated a 4 cm oval, well-circumscribed mass in the right postero-lateral parapharyngeal space, hypointense on T1 and hyperintense on T2, with heterogeneous enhancement after contrast. The internal carotid artery was displaced anteriorly and the internal jugular vein posteriorly, suggesting a vagal schwannoma **(figure2).**

Surgery was performed through a combined transcervical and transparotid approach. The tumor was encapsulated, originating from the vagus nerve, and displacing the carotid-jugular bundle **(figure3).** Complete excision was achieved under microscopic control while preserving the main nerve trunk **(figure 4).** The postoperative course was favorable, with no dysphonia or swallowing disorders. Histopathology confirmed a benign vagal schwannoma **(figure5).** After six months of clinical and radiological follow-up, no recurrence was observed.

DISCUSSION

Vagal nerve schwannomas are rare, representing less than 5% of parapharyngeal tumors [1,2]. They are benign, slow-growing lesions that typically present as painless lateral cervical masses, sometimes associated with dysphagia, hoarseness, or pharyngeal discomfort [2]. MRI is the imaging modality of choice, providing excellent tissue characterization and delineating the relationship between the tumor and adjacent neurovascular structures [3,4]. The displacement of the internal carotid artery anteriorly and the internal jugular vein posteriorly is highly suggestive of a vagal origin [4]. Differential diagnoses include paragangliomas, deep-lobe salivary tumors, and lymphatic or soft-tissue lesions [4,5].

Surgical excision remains the standard treatment, particularly in symptomatic patients or in case of tumor growth [5,6]. The transcervical approach provides excellent exposure for tumors located in the retrostyloid parapharyngeal space, while transparotid extension can be used for high cervical or skull base lesions [6]. The major challenge is the preservation of vagal function. Two main surgical options are described: complete extracapsular resection and intracapsular nerve-sparing removal [7,8]. The latter is favored when possible, as it minimizes postoperative deficits while maintaining excellent oncological control [7]. The use of operative microscopy and intraoperative nerve monitoring (IONM) is now strongly recommended to avoid accidental nerve injury and improve functional outcomes [8].

Postoperative complications are usually transient and mainly include dysphonia, cough reflex loss, and mild swallowing disturbance, all of which are related to vagal manipulation. Functional preservation exceeds 80% in recent nerve-sparing series [2,7]. Malignant transformation is extremely rare, and recurrence is reported in less than 5% of cases following total resection [3].

Our case reinforces the importance of preoperative MRI to define the vascular and neural relationships, meticulous microsurgical dissection under magnification, and multidisciplinary coordination involving ENT surgeons, radiologists, anesthesiologists, and speech therapists to ensure optimal functional results.

CONCLUSION

Parapharyngeal vagal schwannoma is a rare but benign entity. MRI plays a crucial role in diagnosis and surgical planning. Microsurgical resection using a nerve-sparing technique under intraoperative monitoring allows complete removal with minimal morbidity and excellent long-term outcomes.

FIGURES :

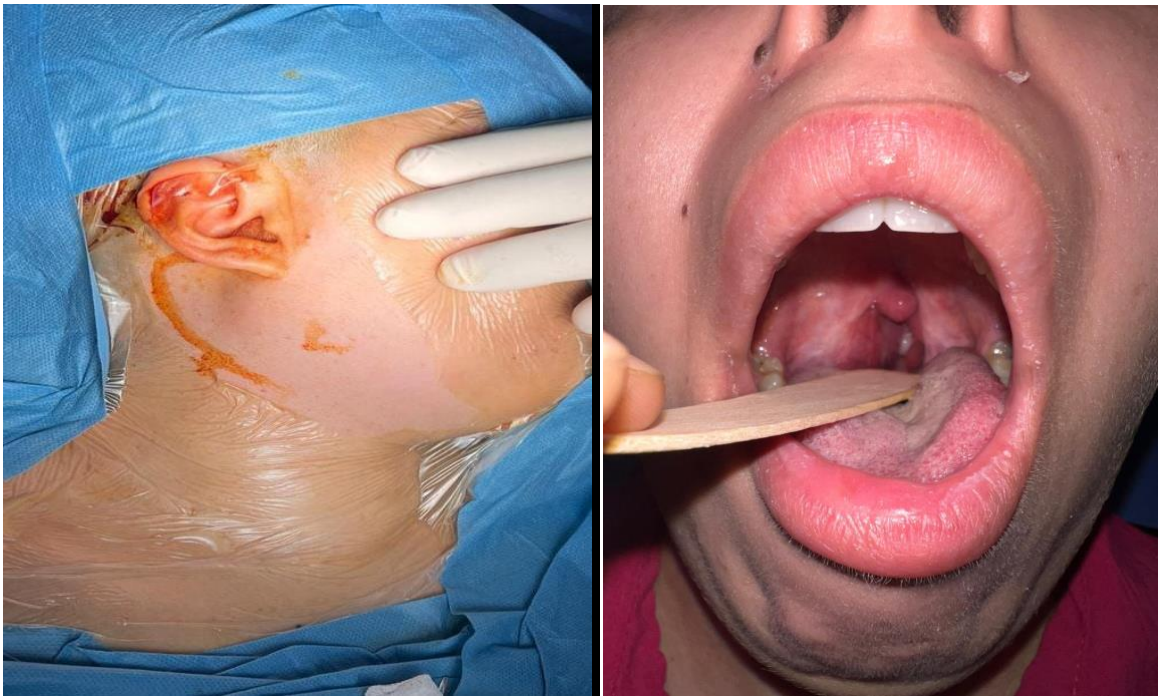

Figure 1 :Preoperative clinical images showing a right cervical swelling with intraoral bulging of the right oropharyngeal wall, without mucosal ulceration or inflammatory signs.

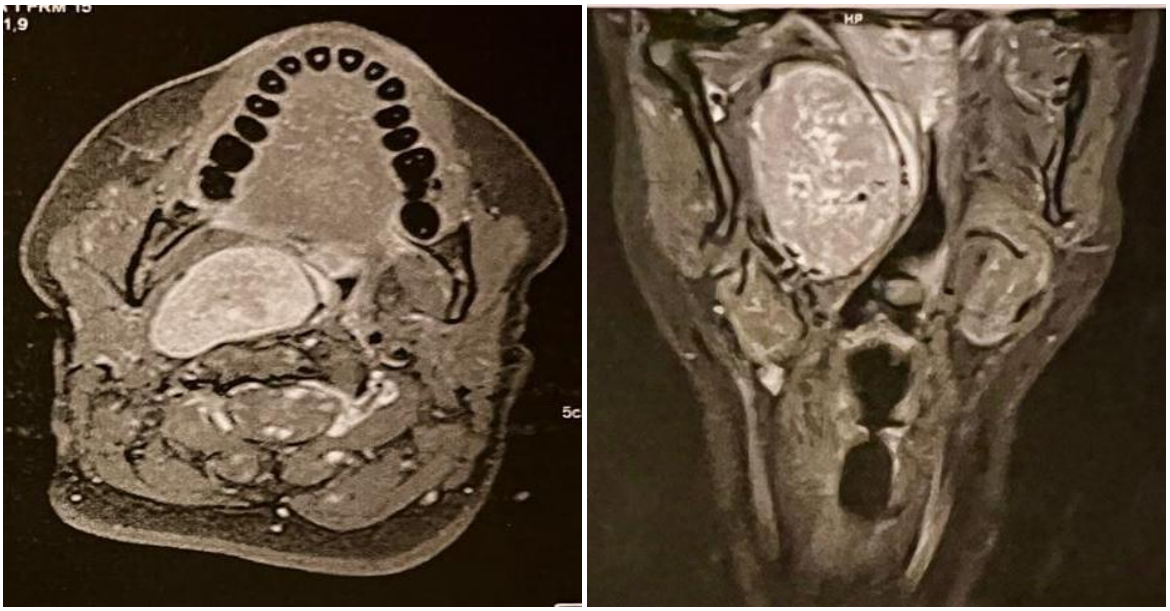

Figure 2 :MRI showing the right parapharyngeal schwannoma (axial and sagittal views).
Well-defined oval mass in T1 hypointensity and T2 hyperintensity, displacing the internal carotid artery anteriorly and the jugular vein posteriorly.

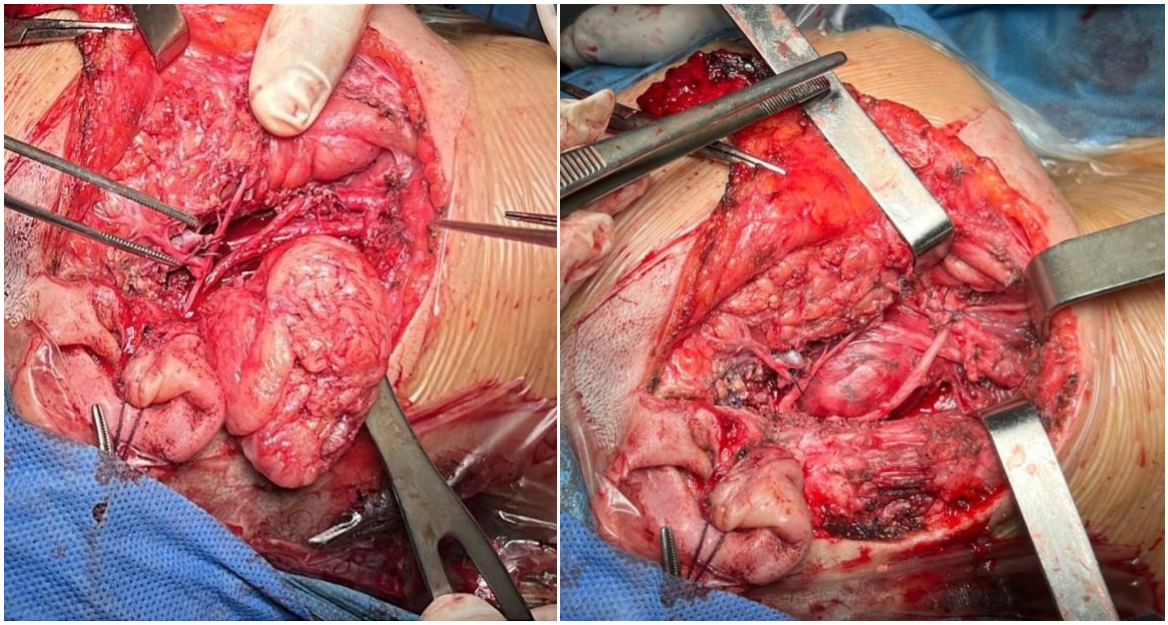

Figure 3 :Intraoperative view of the parapharyngeal schwannoma.
Encapsulated tumor exposed through a right transcervical–transparotid approach; the carotid artery (arrow) is displaced anteriorly.

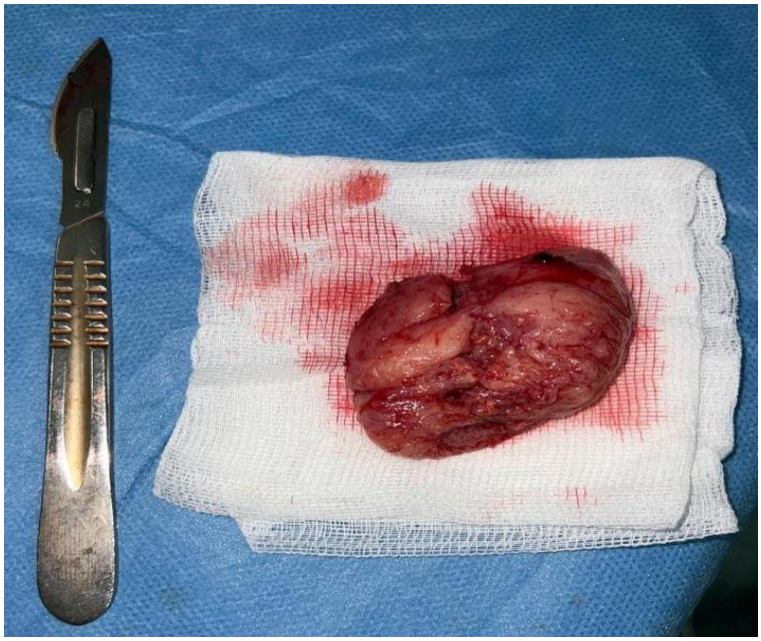

Figure 4 :Operative specimen of the excised vagal schwannoma.
Well-encapsulated ovoid mass measuring about 4 cm after total removal.

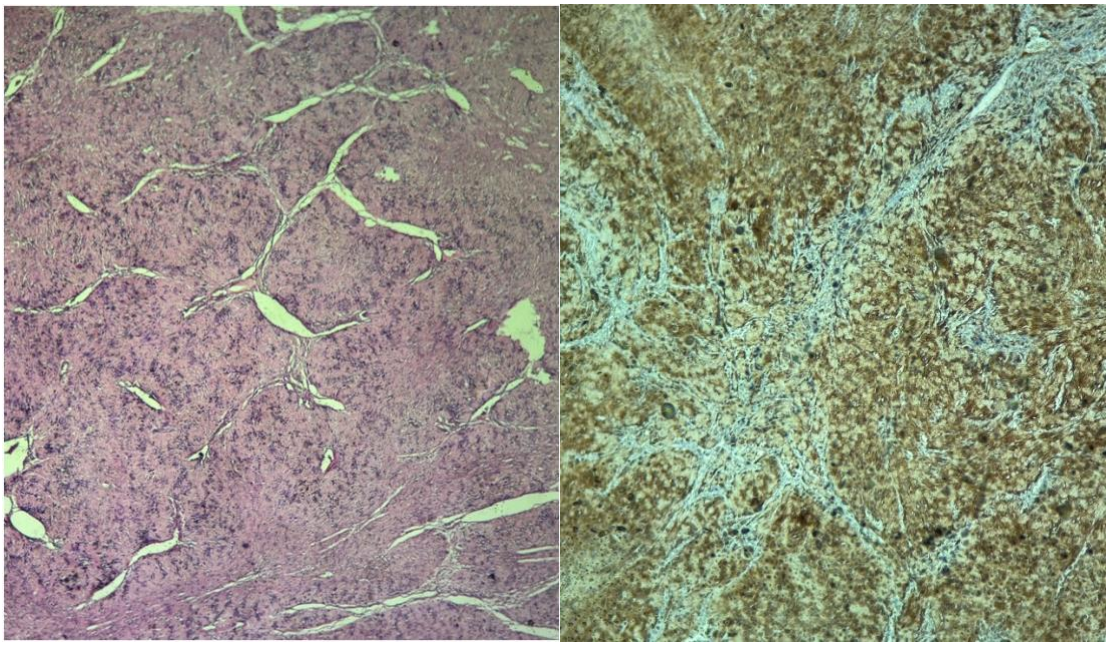

Figure 5 :Histopathological appearance of the schwannoma (H&E ×20).
spindle-shaped cells organized into compact palisading areas (Antoni type A) and loose myxoid regions (Antoni type B).and Verocay bodies. Diffuse immunohistochemical positivity for S-100 protein confirms the diagnosis.

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Conflicts of interest

The author declares no conflict of interest.

Patient consent

Written informed consent was obtained from the patient for the publication of this case and accompanying clinical images.

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