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SHORT COMMUNICATIONS AND CASE REPORTS

Posterior pharyngeal wall schwannoma - an unusual case

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Summary

Schwannomas of the pharynx are very rare lesions. In this article we report the features of a schwannoma arising from the posterior pharyngeal wall in an 59-year-old man with a 6-month history of oropharyngeal dysphagia. Computerized tomography (CT) showed a well-defined tumor mass originating from the posterior pharyngeal wall. The lesion was removed via external approach by using lateral pharyngotomy. To our knowledge, only 6 cases of schwannomas of the posterior pharyngeal wall have been reported.

Key words: lateral pharyngotomy, pharynx, posterior wall, schwannoma, surgery

Introduction

Schwannomas arise from the Schwann cells of the peripheral cranial nerves and are very uncommon, slow-growing submucosal lesions. The posterior wall of the pharynx is an extremely rare localization for schwannoma, and we might even say exceptional, if we consider that there have only been 6 previous cases published in the international literature [1-6]. Because these tumors create swallowing difficulties or even airway obstruction, prompt diagnosis and treatment are vital. In this article we describe an additional case of posterior pharyngeal wall benign schwannoma that was treated with complete resection via external approach by using lateral pharyngotomy.

Case presentation

A 59-year-old male was admitted to the ENT department with a 6-month history of progressive dysphagia, recently complicated by mild dyspnea. Both indirect and direct laryngoscopy under general anesthesia showed a smooth-surfaced pharyngeal submucosal mass on the right side 2 cm in diameter (Figure 1). Arytenoid region, aryepiglottic and ventricular folds could not be clearly identified but laryngeal motility was preserved. The mucosa lining was intact, mobile and even. A CT showed a rounded, well-outlined pharyngeal mass indicating a likely benign nature of the lesion arising from the posterior pharyngeal wall (Figure 2). Angiography showed a rather poor vascular supply. An external approach via lateral pharyngotomy without cartilage excision and tracheotomy was performed (Figure 3) and

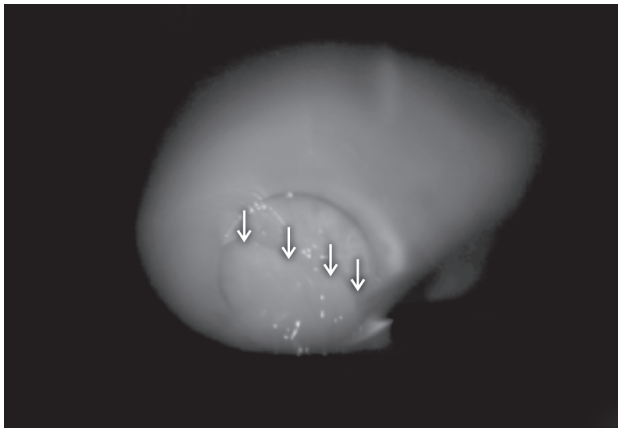

Figure 1. Mass presenting as submucosal bulge (arrows) involving the posterior pharyngeal wall.

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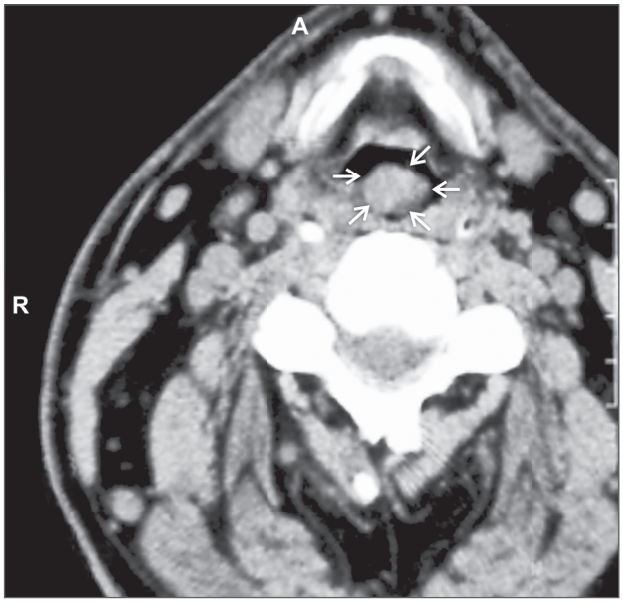

Figure 2. CT scan showing a well-defined pharyngeal mass (arrows).

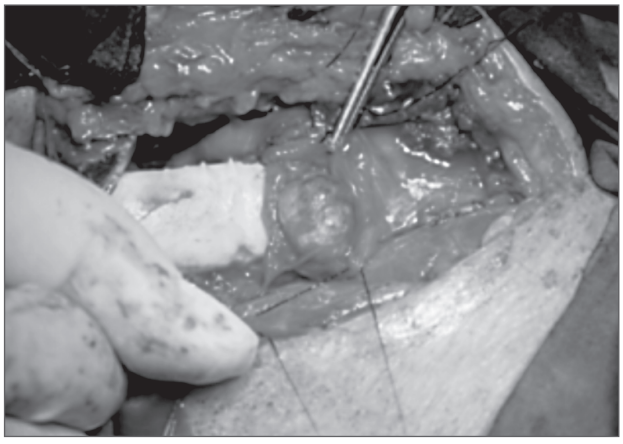

Figure 3. Minimally invasive lateral external approach to the submucosal tumor; incision of the overlying intact mucosa and exposure of the tumor with intact capsule.

the tumor mass was completely removed. The histological evaluation confirmed a benign schwannoma (Figure 4). There was no need for nasogastric tube and oral feeding was initiated 3 days postoperatively. Recovery was uneventful, and the swallowing and breathing were improved. No recurrence was observed during one year of follow up.

Discussion

Benign nerve sheath neoplasms originate from Schwann cells and include schwannomas and neurofibromas. The commonest site of schwannoma in the head and neck area is the parapharyngeal space and the commonest nerve of origin is the vagus nerve [7]. Schwannomas are encapsulated, grow away from the nerve trunk and can occur along any somatic or sympathetic nerve in the body. Patients typically present with often long-standing history of dysphagia, globus pharyngeus or odynophagia.

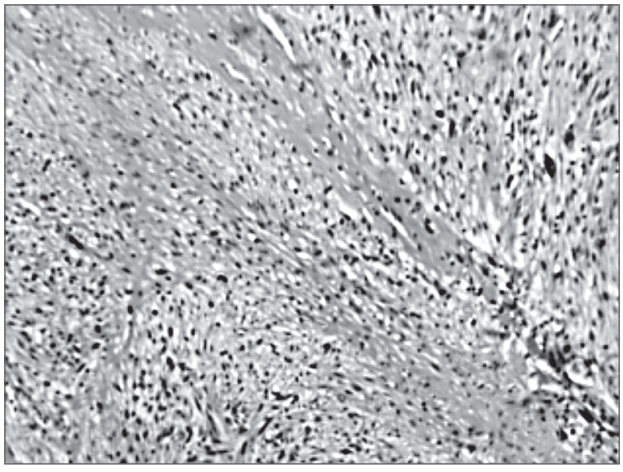

Figure 4. Histopathological section of the tumor demonstrating areas of compact spindle cells arranged in a palisade pattern (H&E ×40).

Although pharyngeal schwannomas are not common, tumors of such a size and location could be considered as rare lesions. These tumors usually present as asymptomatic mass and often grow to a considerable size before they become clinically detectable. The symptoms and signs of previously reported cases were progressive pharyngeal swelling, tenderness and respiratory difficulties due to the pressure of the tumor. Our case revealed an extremely large and bizzare-shaped funicular schwannoma completely obstructing the upper airway, with tracheotomy being the initial procedure [8].

Our case was not quite typical having in mind that these tumors are more frequent between 25 and 50 years of age. During preoperative evaluation it is difficult to differentiate schwannoma from other benign or malignant tumors. This difficulty may be overcome with preoperative biopsy. However, deep biopsy may induce bleeding from a vascular tumor or may even be impossible due to the frequent presence of a firm capsule. Sometimes with preoperative biopsy there is a risk of creating a fibrous adherence between the capsule of the tumor and the mucosa of the pharyngeal wall, leading to difficulties with the following removal of the tumor. Since in our case indirect laryngoscopy, CT scan and angiography all pointed to a benign nature of the mass no preoperative biopsy was performed.

Schwannoma of the posterior pharyngeal wall may erode the body of the cervical vertebrae [1,3], something that was not observed in our case.

Surgical removal is the treatment of choice, but selection of surgical approaches is controversial. Mainly two options have been frequently reported: different external procedures and transoral approach by direct laryngoscopy. In larger tumors pharyngotomy (sometimes with ligation of the superior thyroid artery) or laryngofissure were proposed [9]. Recent studies suggest the use of a more conservative transoral approach and tumor excision via direct microlaryngoscopy [10]. In our case, the large tumor size prevented us from endoscopic enucleation. We were able to exclude ligation of the large thyroid vessels based on the preoperative angiography. This was confirmed intraoperatively because of a quite modest bleeding which was easily controlled. Sometimes, in similar circumstances it has been proposed to remove one third of the vertical height of the ipsilateral thyroid cartilage. However, this was not required in our case. Furthermore, if we had attempted a laryngofissure in our patient the tumor would have been resected more easily, but the patient's phonation probably would have been affected. Following mucosa incision along the projection of the aryepiglottic fold, a careful surgical dissection gradually exposed the tumor and its fibrous capsule which was left intact. In this way the tumor was completely enucleated and removed without any interference with the laryngeal framework, thus reducing the postoperative recovery. With this technique, the tumor can often be enucleated from the nerve trunk of pharyngeal plexus. Such a total tumor resection prevented recurrence during a 12-month follow up.

In summary, the surgical excision of posterior wall schwannoma can be performed using external approach without tracheotomy. This allows good exposure with minimal functional disability. Ligation of blood vessels is not obligatory.

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