The contents of the retropharyngeal space are limited to fat and retropharyngeal nodes. Primary tumors originating from the retropharyngeal space are rare. More than 25% of schwannomas are found in the head and neck region, and they are rarely found in the retropharyngeal space. Here, we report the case of a 44-year-old woman with a schwannoma confined to the left retropharyngeal space, who presented with snoring and a mild lump in the throat sensation. Physical examination revealed anterior bulging of the left oropharyngeal wall, with intact mucosa. Magnetic resonance imaging showed a well-defined, encapsulated tumor in the left retropharyngeal space with bright signal intensity on T2-weighted images and low signal intensity on T1-weighted images, which was strongly enhanced after gadolinium administration. The tumor was removed through a transoral approach, resulting in a short postoperative recovery time without complications. The pathologic diagnosis was schwannoma. The patient has been well and free of tumor recurrence for 2 years. From anatomic and physiologic viewpoints, excision through a transoral approach is a good choice for a confined retropharyngeal schwannoma.

Key Words: excision, retropharyngeal space, schwannoma, snoring

images (Figure 1) and low signal intensity on T1-weighted images, which was strongly enhanced after gadolinium administration (Figure 2). Incision of the oropharyngeal mucosa behind the left posterior pillar and division of the superior constrictor muscle and deep cervical fascia were performed using a transoral approach (Figure 3). With lateral protection of the internal carotid artery by the long haller, a well-encapsulated yellowish tumor measuring about $3.5 \times 3 \times 2.5$ cm was completely removed from the bed of the prevertebral fascia and muscle (Figure 4). The patient was kept non per os for 1 day, but started taking food the day after surgery, without a feeding tube. The pathologic diagnosis was schwannoma. The patient is currently well and free of snoring and the lump in the throat sensation, and no cranial nerve or sympathetic nerve dysfunction has been reported in the 2-year follow-up period.

**DISCUSSION**

Approximately 25–45% of schwannomas occur in the head and neck region. They can affect any peripheral, cranial, or autonomic nerves, the most common of which are cranial nerves XII, X, IX, and V and the
cervical roots [4]. Therefore, the parapharyngeal space of the neck is the most common site of occurrence, followed by the oral cavity and sinonasal region. Although there have been sporadic reports of schwannomas growing on the posterior oropharyngeal mucosal wall [5–10], there have only been two reported cases of schwannomas in the retropharyngeal space [9,10], even in large case studies of head and neck schwannomas [11].

As schwannomas are inherently slow growing and noninvasive, most patients present with an asymptomatic mass without nerve dysfunction; it is difficult to determine the nerve of origin without conducting imaging studies before surgical exploration. Among the imaging modalities, MRI with and without gadolinium enhancement is particularly helpful in delineating schwannoma [12]. On MRI, schwannomas show low signal intensity on T1-weighted images and high signal intensity on T2-weighted images. Following the administration of gadolinium, the solid part of the tumor is strongly enhanced, while the cystic component remains unchanged, which frequently has a salt-and-pepper appearance similar to paragangliomas. But schwannomas can still be distinguished from paragangliomas by the contours of the tumor, destruction of adjacent tissues, and vascular stains shown on magnetic resonance angiography [13]. Furthermore, the location and relationship between the tumor and adjacent structures allow the nerve of origin to be predicted preoperatively, thus allowing surgical risks to be evaluated [13].

The primary goal of schwannoma treatment is complete tumor removal without any loss of function. After an accurate diagnosis, if surgery is contraindicated due to poor patient condition or tumor involvement with important vital structures, an alternative treatment choice is observation of the tumor. However, observation or leaving an incompletely resected tumor behind may be of concern because some tumors can undergo malignant change and cause local destruction [10,12].

In this case, complete tumor removal was the preferred choice of treatment. Not only did an accurate histologic diagnosis have to be determined, but also the snoring and the lump in the throat sensation had to be resolved. If the tumor was left behind, it could grow progressively larger, possibly leading to upper airway obstruction and destruction of adjacent structures such as the cervical vertebra.

MRI showed that the tumor had a typical schwannoma appearance and may have originated from a small nerve supplying the pharynx, without involvement of the main trunk of the major nerves. Therefore, we expected a low probability of resection-related significant neurologic complications. Moreover, this tumor was confined to the medial part of the retropharyngeal space, away from the internal carotid artery, which implied that tumor excision through a transoral approach was feasible and could be performed safely. Therefore, a transoral approach, which is preferred when a tumor is centered within the retropharyngeal space, was taken for the excision of this schwanna. Using a transoral approach can avoid problems arising from a transcervical approach, which requires skin incision and potentially damages cranial nerves IX, X, and XII, as well as the vascular structures [6]. From the preoperative evaluation, it appeared that the entire tumor could easily be widely exposed and removed without injuring the great vessels and major nerves. After operation, the surgical wound healed rapidly without causing swallowing problems, and the patient has remained free of any recurrence or neurologic deficits.

Although rare, schwannomas do occasionally occur in the retropharyngeal space. From anatomic and physiologic viewpoints, excision through a transoral approach is a good choice for a confined retropharyngeal schwannoma.

References


經口切除治療之後咽腔神經鞘瘤 — 病例報告

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後咽腔內壁物僅有脂肪及後咽腔淋巴結。源於此部位的原發性腫瘤甚為罕見。超過百分之二十五的神經鞘瘤出現在頭頸部，但源自於後咽腔的神經鞘瘤則非常罕見。本文中我們報告一位罹患左側後咽腔神經鞘瘤的 44 歲女性，其臨床表現為打鼾及輕微喉嚨異物感。理學檢查顯示左側口咽壁向前突出，而其覆蓋之黏膜則仍完整平滑。核磁共振影像顯示左側後咽腔有一界限明顯且包膜完整的腫瘤。腫瘤在 T2-weighted 影像顯示強烈號號強度；在 T1-weighted 影像中其號號強度弱，但在打入顯影劑後號號明顯增加。作者採用經口術式切除此一腫瘤。患者術後復原良好且無明顯併發症。病理診斷結果為神經鞘瘤。術後兩年，患者情況良好並且無腫瘤復發。從解剖及生理觀點來看，以經口術式切除局限於後咽腔的神經鞘瘤是個合理的手術選擇。

關鍵詞：切除，後咽腔，神經鞘瘤，打鼾

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