

## Lateral Oropharyngeal Schwannoma

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### Introduction:

A schwannoma is a benign encapsulated tumor arising from neural sheath cells called the Schwann cells. Approximately, 25 to 48% of these tumors are present in the head and neck with most arising from cranial nerves 9, 7, 11, 5 and 4 in that order. Schwannoma may be associated with neurofibromatosis and vonRecklinghausen's disease. Schwannoma arising from pharyngeal wall are extremely rare and present a diagnostic challenge to the Otorhinolaryngologist.

### Case Report

We present a case of a 26-year-old male who presented to the Outpatient Department (OPD) of ALBASHEER Hospital, Amman, Jordan, with complaints of foreign body sensation in the throat since 3 months. He had also complained of odynophagia, dysphagia or change in voice. He did not have any associated aural complaints. Local examination of the oral cavity proved to be inconclusive and a videoendoscopic examination was done in the OPD, which revealed a soft, pinkish, sessile, polypoidal mass arising from pharyngeal wall around base of tongue.

### Imaging

A contrast enhanced computed tomography (CECT) scan was ordered to rule out any malignant conditions or any vascular malformations in the area. The computed tomography (CT) scan revealed soft tissue attenuation of a polypoidal mass lesion projecting from left lateral oropharyngeal wall measuring  $1.75 \times 1.5 \times 2.5$  cm at level of C2 vertebrae, compressing the Base of the tongue. After contrast media injection showed significant enhancement with minimal heterogeneity.

### Surgical Management

The patient was worked up for surgery and was operated upon by the transoral route. Using Boyle Davis Mouth gag for visualization, the mass was excised with sharp dissection and bipolar diathermy for hemostasis. The base of the mass was cauterized with bipolar diathermy and we did not try to localize the nerve of origin. The patient was extubated successfully without any respiratory compromise. He was started on an oral diet at same day of operation, which he tolerated well.

### Histopathology

Upon histologic examination on gross description it showed oval shape partially encapsulated soft tissue of size  $3 \times 1.5 \times 1$  cm showed hemorrhagic whitish surface.

On microscopic description it showed features consistent with circumscribed encapsulated mass covered by squamous epithelium composed of hypercellular areas (Antoni A areas) and myxoid hypocellular areas (Antoni B areas) with nuclear palisading (Verocay bodies) A diagnosis of schwannoma was made upon the characteristic histopathologic finding and a positive S 100 stain.

### Follow up

He was completely asymptomatic 3 weeks postsurgery and a repeat videoendoscopy was done after 1 month and 6 months which showed complete excision of tumor with complete healing and no residual tumor. He did not have any post operative neural deficits.

### Discussion

Schwannoma is slow growing benign encapsulated tumors, which grow along the cranial nerves. The pathogenesis involves proliferation of the Schwann cells lining the neural sheath. Although they can occur along any nerve, the most common cranial nerves affected according to occurrence are 9th, 7th, 11th, 5th and 4th. Among the differentials of a polypoidal mass in the hypopharynx, hemangiomas, hemangiopericytomas, neurofibromas, lipomas, fibromas and lymphangiomas must be considered. The various symptoms associated with lateral pharyngeal wall schwannoma vary from foreign body sensation in throat, dysphagia, change in voice to respiratory difficulty. Slow progression of these symptoms point toward a more benign disorder. We recommend a videolaryngoscopy where possible as this helps in accurate planning and recording the lesion. The only gold standard diagnostic investigation is histology of either biopsy or excised specimen. Imaging, such as CT or magnetic resonance imaging (MRI) is invaluable in assessing the lesion. Surgical treatment is essentially the only option with preservation of the nerve function. Surgery involves complete excision or enucleation of the tumor. Various approaches have been employed, with the traditional open approach to the minimally invasive endoscopic transoral approach. We employed a transoral route with a mouth gag to facilitate surgical instrument access. However, in larger tumors not amenable to transoral approach a more traditional lateral pharyngotomy approach may be best. Tracing the nerve of origin has no effect on tumor clearance as long as the tumor does not encapsulate the nerve, as preservation of its function is paramount. Histologically, schwannoma has two different patterns: Antoni A and B areas. The former describes a cellular area in which sheets of spindle-shaped cells are often arranged in a palisading fashion, called Verocay bodies. The latter is composed of myxoid, loose, degenerative areas. Moreover, S 100 protein positivity with no demonstrable mitotic activity is suggested to be characteristic of these cellular areas. We are reporting this case due to its rarity and the diagnostic and therapeutic challenges, which are presented to the surgeon.

### Conclusion

Schwannoma is a benign neurogenic tumour. Because schwannomas are rare in this site, often not immediately applied in our differential diagnosis, which led to delay in identification and treatment. Complete excision must be done by various approaches, and our definitive diagnosis must be confirmed by histopathological examination.