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Novel diagnostic procedure

Benign schwannoma of the tonsil

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Summary

The case of a rare tumour in a rare location is presented, and important aspects of the management of similar clinical scenarios are highlighted. Tonsillar schwannoma is a slow growing lesion presenting in the third to fifth decade of life. Histological diagnosis is made through the identification of Antoni A (Verocay bodies) and Antoni B cells with S-100 expression. A 24-year-old man presented with a 5 cm right tonsillar tumour causing dysphagia and dysphonia for 6 weeks. Tonsillar schwannoma can be diagnosed in the outpatient clinic. CT imaging and tissue biopsy are the appropriate investigations followed by complete surgical enucleation. Schwannoma has the potential for malignant transformation, with no recorded cases of this occurring in the tonsil.

BACKGROUND

The case of a slow growing, extensive unilateral tonsillar swelling is presented. This posed an interesting diagnostic challenge involving the unusual presentation of a rare tumour.

CASE PRESENTATION

A 24-year-old man had a sensation of a lump in his throat and mild dysphonia for 6 weeks.

Examination revealed a 5 cm, smooth, spherical swelling emanating from the right tonsil without tenderness or fluctuance. The rest of the examination was normal.

There was no family history or clinical evidence of neurofibromatosis type I or II.

INVESTIGATIONS

CT scanning confirmed presence of the right tonsillar lesion with no abscess cavity or regional lymph node enlargement (figure 1).

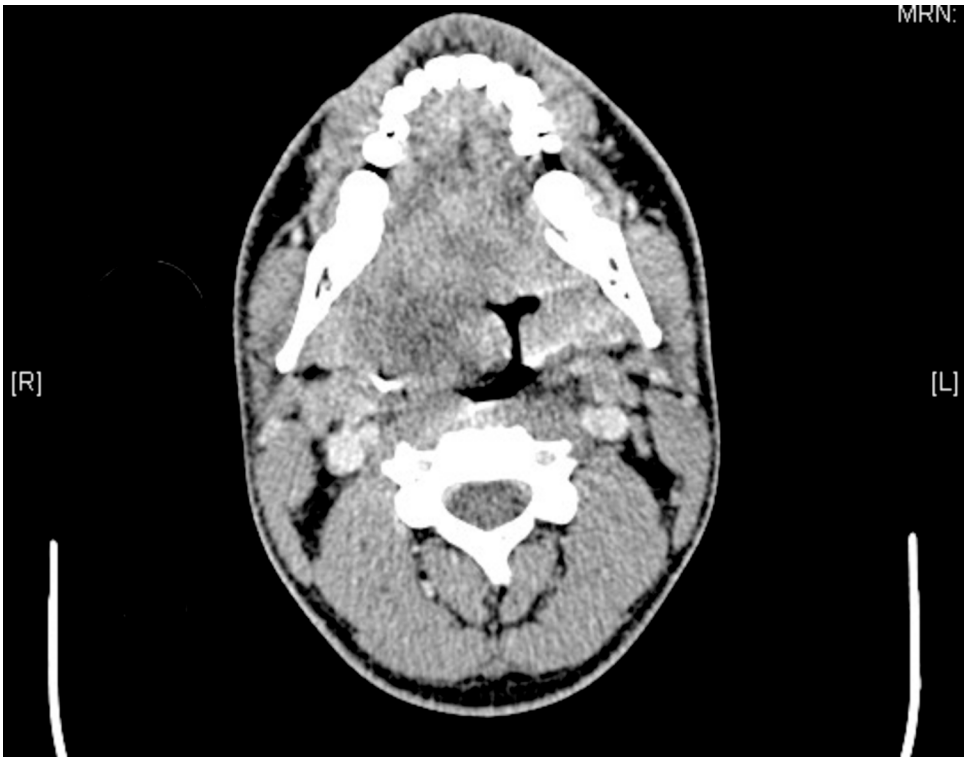

Figure 1 Axial CT scan showing right-sided tonsillar schwannoma extending into the oropharynx (published with the patient's consent).

A local anaesthetic biopsy was performed in the outpatient clinic. Histology showed a spindle cell lesion expressing S100 protein, the morphology and immunoprofile being consistent with a benign schwannoma.

DIFFERENTIAL DIAGNOSIS

- Infection
- Mucous retention cyst
- Neurofibromatosis
- Malignancy

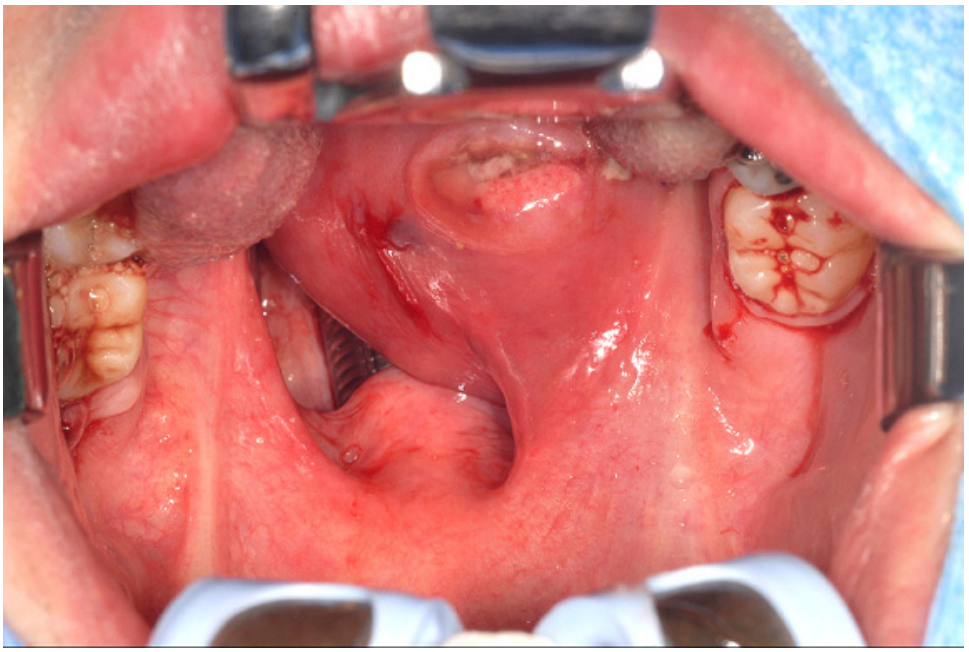

Figure 2 Intraoperative photograph showing the right-sided schwannoma in situ (published with the patient's consent).

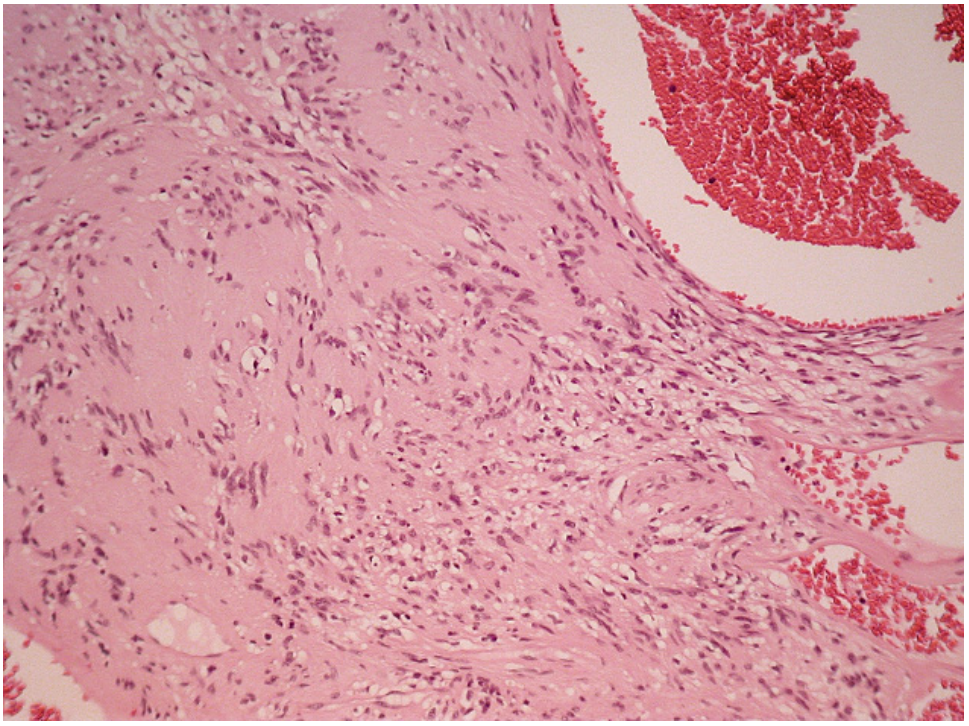

Figure 3 H&E-stained slide viewed at low power showing a variably cellular lesion composed of spindle cells with focal nuclear palisading, so-called Verocay bodies (arrows) and prominent blood vessels (bv) (published with the patient's consent).

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TREATMENT

The 5×3 cm tumour was completely excised with intact capsule under general anaesthetic with no complications (figure 2).

OUTCOME AND FOLLOW-UP

Histological examination confirmed the biopsy diagnosis (figure 3). At 2-week follow-up adequate healing and resolution of symptoms was seen.

DISCUSSION

Schwannomas are rare, slow growing, usually solitary benign nerve sheath tumours originating from ectodermal Schwann cells.[1] 25% to 48% occur in the head and neck region.[2] Malignant transformation has been noted when schwannoma is associated with neurofibromatosis type I,[3] but is exceedingly rare with sporadic schwannoma.[4]

Head and neck schwannomas usually involve the vestibulocochlear nerve with bilateral involvement diagnostic for neurofibromatosis type II. Only 1% occur in the oral cavity[5] and only five cases involving the palatine tonsil are reported in the global literature.[1 6–9] Symptoms arise due to a mass effect exerted by the tumour on surrounding structures.

MRI scanning is the modality of choice in evaluating neural tumours,[5] however CT scanning provides adequate presentation of the anatomy. The radiological features with either modality are not diagnostic.

Tissue biopsy is the investigation of choice for achieving a diagnosis in nerve sheath tumours as shown in this case.

Macroscopically schwannomas are usually encapsulated lesions. Histologically they are characterised by a biphasic pattern with mixed hypercellular (Antoni A) and hypocellular (Antoni B) areas, both usually being present. In the hypercellular areas palisaded nuclei are frequently seen, so-called Verocay bodies.

The treatment of choice for benign schwannoma is surgical enucleation without the need for excision of surrounding structures.[2] Where possible all such tumours should be excised to avoid the risk of malignant transformation.

CONCLUSIONS

Schwannoma is a rare cause of benign swelling of the tonsil usually in patients presenting between the ages of 20–50. Diagnosis can be achieved through CT or MRI followed by biopsy in the outpatient clinic. Effective treatment is complete by surgical resection. Careful clinical evaluation of the patient should be made for associated neurofibromatosis. Although there are no recorded cases of malignant schwannoma (malignant peripheral nerve sheath tumour) of the tonsil, such lesions should be excluded clinically and histologically before treatment.

Learning points

- Fine needle aspiration is unreliable for diagnosis.
- Biopsy under local anaesthetic in clinic is optimal.
- CT is an appropriate form of imaging.
- All such lesions should be excised due to malignant potential.
- Examination for evidence of neurofibromatosis should be made.

Competing interests None.

Patient consent Obtained.

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