Case Report

Schwannoma of the tongue in a ten-year old child

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Abstract

The case of a 10-year-old girl is presented who had a slow-growing, painless swelling on the left side of the tongue since six months. This was associated with disturbances in mastication and phonation. Examination revealed a 5 cm x 4 cm, globular smooth, mobile mass on left side of the tongue. There was no neurological deficit and no neck nodes palpable. She underwent excision of the mass under general anaesthesia. Complete enucleation with primary closure was carried out. The patient had an uneventful postoperative recovery and histological evaluation was consistent with schwannoma. The patient was recurrence free after one year.

Keywords: Schwannoma, Tongue, Oral.

Introduction

A schwannoma is a benign, encapsulated, slow growing tumour, arising from the neural sheath's Schwann cells of the peripheral, cranial or autonomic nerves.[1] Although the etiology is unknown, it is believed that the lesion arises from proliferation of Schwann cells at a point inside the perineurium, which causes a displacement and compression of the surrounding normal nerve.[2] Approximately 25-40 % of these tumours occur in the head and neck region.[3] A rare site for for schwannoma is the oral cavity, it accounts for only 1% of all head and neck region tumours.[3] Gallo et al reported that the tongue was the most common site of occurrence in the oral cavity.[4] It is quite rare to diagnose schwannoma in children. However, the exact frequency of schwannoma in children is difficult to determine from the literature.

Case Report

A 10-year-old girl presented with a slow-growing, painless swelling on the left side of the tongue for 6 months duration. She complained of, disturbance in mastication and phonation. There was no pain or bleeding.

Examination revealed a 5 cm x 4 cm, globular mobile mass with a smooth surface, on the left lateral border of tongue. The margins were well demarcated (Figure-1). There was no neurological deficit and no neck nodes palpable. The clinical impression was of a benign tumour of the tongue. Therefore, initial biopsy and imaging studies were not performed. She underwent excision of the mass under general anaesthesia via intraoral approach. Horizontal incision at the lateral border followed by complete enucleation with primary closure was carried out. Intraoperatively the mass appeared well encapsulated and a good cleavage plane was easily found. The mass was totally excised and the surgical specimen was an ovoid soft tissue mass with a thick capsule. The patient had an uneventful postoperative recovery. The mobility of the tongue was good. On histological examination, the nodular mass exhibited thick fibrous capsule and numerous bands of spindle cells displaying elongated nuclei with mild pleomorphism. There was no significant mitotic activity seen. Compressed blood vessels and foci of myxoid change were noted. Focal pallisading arrangement with spindle cells was also seen. The tumour was completely excised. The

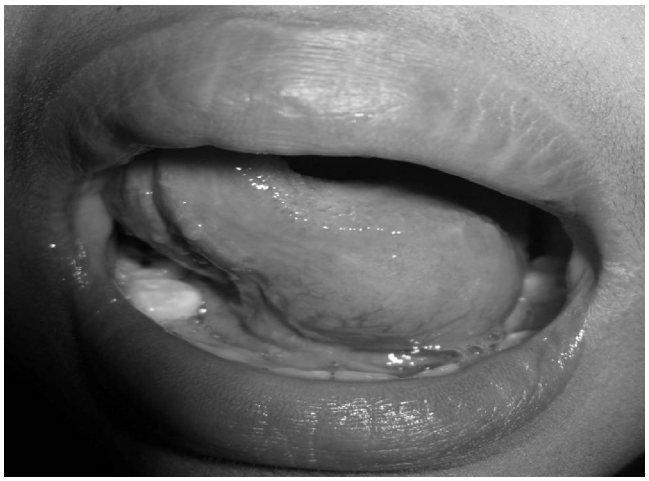

Figure-1: A picture showing the schwannoma of the left side of the tongue.

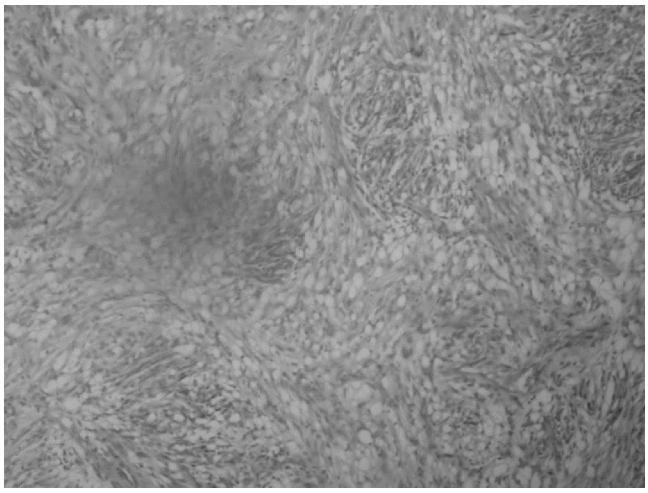

Figure-2: Tumour is almost entirely composed of type A Antoni areas. Cellular areas with spindle cells often arranged in pallisading fashion (H & E; X 100 magnification).

histopathological finding was consistent with schwannoma (Figure-2). At postoperative review there were no stigmata of multiple neurofibromatosis. There was no recurrence after tumour extirpation during the course of a one-year follow-up.

Discussion

Schwannoma usually occurs in adults and although they can involve children but are not commonly seen in the younger age group. There is no gender preference. The disease is usually asymptomatic.[5] Schwannoma of the tongue always presents as a painless mass, although pain and paresthesia may occur. Other symptoms include disturbance in mastication, phonation, dyspnoea or dysphagia, depending on the location of tumour.

Although they account for just over 1% of benign tumours reported in the oral cavity,[6] they are the most commonly encountered nerve sheath tumours in this location.[7] The intraoral lesions have a predilection for the tongue, followed by the palate, floor of mouth, buccal mucosa, mandible,[7] and may have clinical aspects similar to other benign lesions like mucocele, fibromas, lipomas, and benign salivary gland tumours.[8] In the tongue, the base of tongue is commonly affected[3] and the tip is the least affected part.[6]

Identification of the originating nerve may be difficult. In more than 50% of intraoral lesions, it is not possible to differentiate between tumours of the lingual, hypoglossal and glossopharyngeal nerves.[9]

Biopsy and imaging has an important role in making preoperative diagnosis of any lesion of the head and neck. In our patient both investigations were not done because the clinical diagnosis was of a benign tumour of the tongue. Although modern imaging as CT scan and MRI can provide useful indications, the diagnosis of schwannoma is usually made post-operatively by histological identification as evident from our case.

Microscopically, the characteristic histological features for a schwannoma of the tongue are similar to those found at other sites. Schwannomas have a distinctive pattern of compact cellularity arranged with palisading nuclei (Antoni A pattern) alternating with a more loosely arranged hypocellular pattern (Antoni B pattern).

Treatment is always surgical and usually requires only an excision or enucleation of the tumour.[6,10] Radiation therapy is not indicated because schwannomas exhibit a high degree of radio-resistance.[4] Prognosis is excellent as the tumour is benign, and recurrence is rare unless the resection of the tumour is incomplete.[2,10] An isolated schwannoma hardly ever becomes malignant.[6,9]

Conclusion

Although the incidence of schwannoma in the tongue is low, it should still be kept in mind when making a diagnosis. They are most often diagnosed in adults but can also occur in children although not that often.

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