Journal of Dental Sciences 19 (2024) 2422–2424

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journal homepage: www.e-jds.com

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Schwannoma of the tongue – A case report

KEYWORDS
Schwannoma;
Neurilemoma;
Oral schwannoma;
Tongue;
Histopathological features

Schwannoma is a benign nerve sheath tumor that arises from Schwann cells of the nerve sheath with uncertain etiology.[1–4] Here, we presented a case of oral schwannoma at the right posterior lateral border of the tongue in a 34-year-old female patient.

This 34-year-old female patient noticed a slow-growing nodule at the right posterior lateral border of the tongue for one month. She came to our oral mucosal disease clinic for evaluation and treatment of the tumor. Intraoral examination revealed a pink, smooth-surfaced, well-demarcated, firm, and non-tender nodule measuring 1.0 × 0.8 × 0.5 cm at the right posterior lateral border of the tongue. The clinical impression was an irritation fibroma. Because the tumor was relatively small and had a benign nature, after discussing with the patient and obtaining the signed informed consent, the small nodular lesion was totally excised under local anesthesia. The removed soft tissue specimen was sent for histopathological examination. Microscopically, the lesional surface stratified squamous epithelium was slightly hyperplastic and parakeratotic. The tumor was well-encapsulated and mainly located in the superficial muscle layer of the tongue (Fig. 1A and B). It was composed predominantly of Antoni A tissue with fascicles of spindle-shaped Schwann cells showing a marked nuclear palisading, alternating with many hypocellular, eosinophilic areas (so-called Verocay bodies) (Fig. 1C, D, E, F, G and H). Because the histopathological features were characteristic, the tumor was finally confirmed to be a schwannoma. The patient was arranged for a regular follow-up every 3 months. The nodular lesion did not recur 9 months after the total surgical excision of the tumor.

The schwannoma is a benign nerve sheath tumor arising from the differentiated Schwann cells. They can originate from nerve sheath of any central, peripheral, or autonomic nerve. Approximately 25%–48% of all cases of schwannoma occur in the head and neck region. Only 1%–2% of schwannomas occur in the oral cavity.[1–4] The most common site of oral schwannomas is the tongue, followed by the palate, floor of the mouth, and buccal mucosa.[2] The peak incidence of schwannomas is between the fourth and fifth decades. There is no race or gender predilection.[2] The majority of schwannomas are solitary, slow-growing, well-demarcated, and asymptomatic.[1–4]

Mutation of a tumor suppressor gene *NF2* on chromosome 22 is crucial in the pathogenesis of schwannomas. The *NF2* gene codes a protein known as merlin. The absence of merlin favors the stimulating mitogenic and survival pathways and the activation of Schwann cells, finally resulting in the development of schwannomas. The alterations of LATS1, LATS2, ARID1A, ARID1B, and DDR1 genes as well as an in-frame fusion of SH3PXD2A-HTRA1 are also discovered in schwannomas. It has been reported that the majority of schwannomas are caused by a 3-hit or 4-hit pathway involving two genes.[2]

Nath et al. reviewed the literature from 1959 to 2022 and found 75 schwannomas of the tongue.[2] Of them, 54% occur in male patients, 56% are in the posterior tongue, the mean age of diagnosis is 25 years, and the average size of the tongue schwannomas at presentation is 2.4 cm in

https://doi.org/10.1016/j.jds.2024.07.032

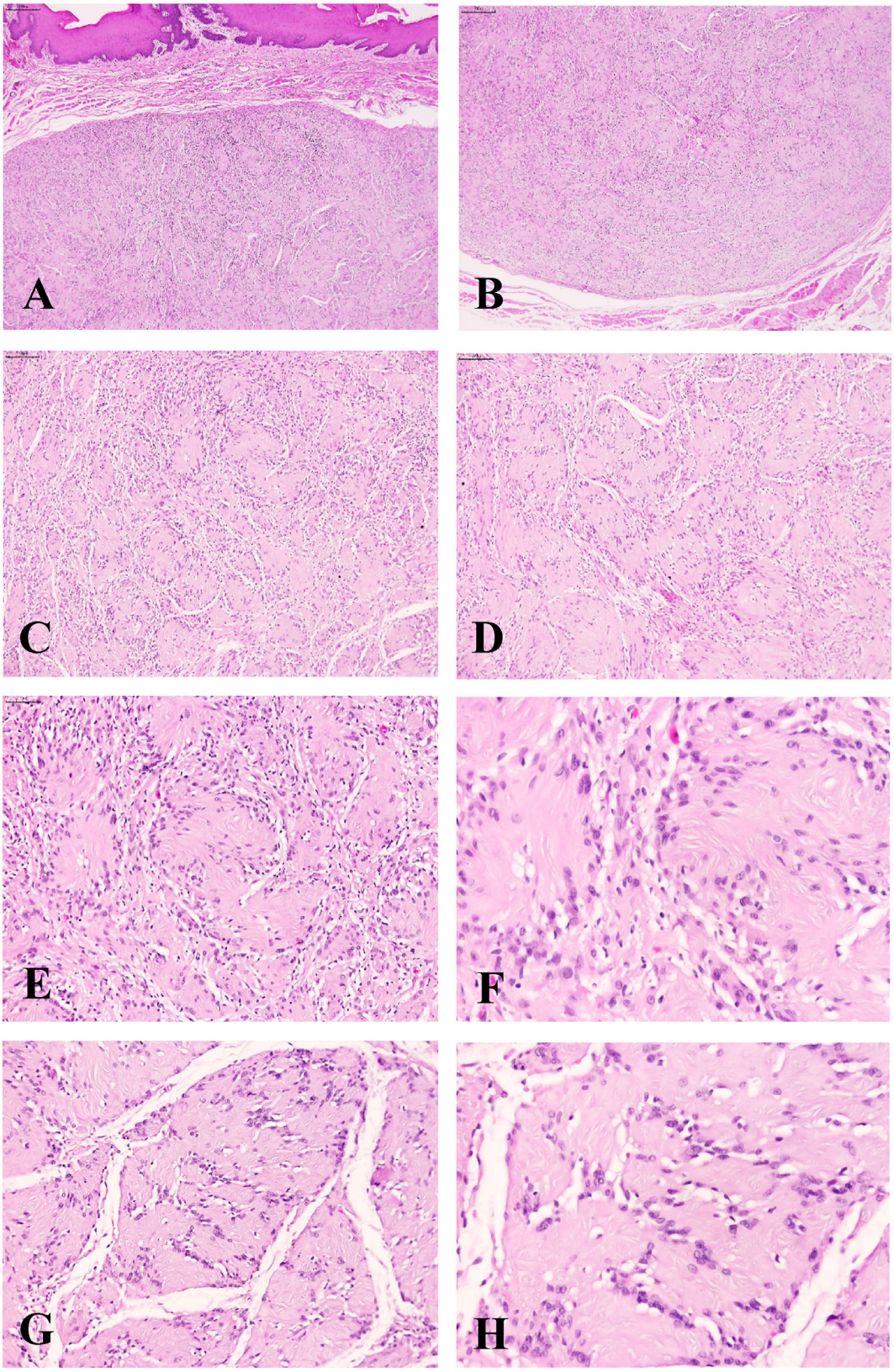

Figure 1 The histopathological photomicrographs of our case of schwannoma of the tongue in a 34-year-old female patient. (A and B) The lesional surface stratified squamous epithelium was slightly hyperplastic and parakeratotic. The tumor was well-encapsulated and mainly located in the superficial muscle layer of the tongue. (C, D, E, F, G and H) Low-, medium-, and high-power photomicrographs showing a tumor composed predominantly of Antoni A tissue with fascicles of spindle-shaped Schwann cells showing a marked nuclear palisading, alternating with many hypocellular, eosinophilic areas (so-called Verocay bodies). (Hematoxylin and eosin stain; original magnification; A and B, 4×; C and D, 10×; E and G, 20×; F and H, 40×).

greatest dimension.[2] Because the majority of schwannomas are well-encapsulated, complete excision of the tumors usually results in an excellent prognosis.[1–4]

Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

Acknowledgments

None.

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Received 20 July 2024
Available online 3 August 2024

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