Spindle cell carcinoma of tongue

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DESCRIPTION

A 55-year-old man presented to the ear, nose and throat clinic with complaints of growth in the left side of the tongue for the past 3 months. The growth was insidious in onset, rapidly progressive in size, and associated with speech and swallowing difficulties. He had history of multiple choking episodes while sleeping. He had a history of smoking and alcohol intake regularly for the past 20 years. On physical examination, there was a 5×5 cm polypoidal, pedunculated mass arising from the left lateral border of the tongue attached by a stalk (figure 1A,B). The mass was firm in consistency. There were no palpable neck nodes. Biopsy showed a poorly differentiated carcinoma with spindle cells suggestive of spindle cell variant of squamous cell carcinoma (SCC) (figure 2A,B). Imaging showed a 3.8×0.8×1.5 cm mass in the left lateral border of the tongue. The lesion was 1.5 cm from the midline raphe and 1.5 cm from the tip of the tongue. No extension to the posterior third of the tongue. There was no lymphadenopathy in the neck, and chest imaging was negative. The patient underwent wide local excision with elective neck dissection. Postoperative biopsy was T3N0M0 spindle cell variant of SCC with immunohistochemistry showing strong vimentin and cytokeratin positivity with p63 negative tumour cells (figure 3A–C).

Spindle cell carcinoma, also known as sarcomatoid carcinoma, is an exceedingly rare variant of SCC with a unique clinicopathological profile. It is an aggressive and poorly differentiated variant that predominantly occurs in the larynx.¹ The incidence of spindle cell carcinoma on the oral cavity is very rare and accounts for less than 1% of all oral cavity tumours. It presents in the sixth and seventh decades of life and is more common in men. It has a unique clinical appearance compared with other SCC. It presents as a polypoid, exophytic or

Figure 2 (A) Sections show sheets of tumour cells with overlying squamous epithelium (H&E40) and (B) round to oval cells which show marked degree of nuclear atypical and frequent mitotic figures (arrow head) (H&E200).

pedunculated mass. It is also known as pseudo carcinoma, polypoid SCC and collision tumour.^{2,3} The spindle cell component arises as an atypical reactive proliferation of the stroma called 'pseudosarcoma'.⁴ The spindle cells and epithelial cells arise from different stem cells hence the name collision tumour.⁵ The risk factors associated with spindle cell carcinoma formation are smoking, alcohol and previous radiotherapy. Oral and oropharyngeal tumours present as painful or painless masses with dysphagia or bleeding.⁶ Regional metastases can occur in about 25% of cases.

Histologically, it can present as a monophasic spindled, pleomorphic or a biphasic tumour where epithelial changes from dysplasia to invasive carcinoma are admixed with spindle cells. It shows hypercellularity with streaming fascicles of spindle cells in a sarcomatous appearance. Immunohistochemistry is helpful to know the histogenesis of the spindle cell in this tumour. Epithelial markers that show positivity are keratin and epithelial membrane antigen, while mesenchymal markers include vimentin, desmin and S-100.⁷

Aggressive surgical resection is considered a mainstay of treatment for this tumour. Surgery followed by radiotherapy is considered for the best long-term outcome. Radiotherapy is considered in inoperable cases and positive surgical margins with extensive nodal metastasis. The factors which favour a good prognosis in spindle cell carcinoma

Figure 1 (A) Gross appearance showing a slough covered smooth, polypoidal mass attached to the left lateral border of tongue and (B) lateral surface of the mass showing areas of haemorrhage.

Figure 3 (A) IHC with vimentin show strong cytoplasm positivity (DABx100), (B) cytokeratin IHC show scattered tumour cells show positivity (DABx200) and (C) shows P63 IHC negative in tumour cells and positive in overlying epithelium (DABx100). IHC, Immunohistochemistry.

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Images in...

are low-stage, small-size, absence of previous radiation, superficial location, polypoid and exophytic growth. A high recurrence rate of 70%–75% has been reported, and hence close follow-up is essential.⁸ There is a noticeable difference in prognosis and overall survival of spindle cell carcinoma compared with SCC. The incidence of metastasis is 36%, and about 30% of all oral cases ended with mortality within 1 year.^{7 8}

The differential diagnosis for this tumour can be

- ▶ Reactive epithelial proliferation
- ▶ Fibromatosis
- ▶ Fibrous histiocytoma
- ▶ Rhabdomyosarcoma
- ▶ Chondrosarcoma

Patient's perspective

I noticed a mass on my tongue which was rapidly growing in size. I consulted the ENT doctors who took a biopsy and told me it is a rare aggressive variant tumour. I underwent immediate surgery and I am on regular follow-up with my doctors. I'm totally relieved of my symptoms now.

Learning points

- ▶ Spindle cell carcinoma is a rare and aggressive variant of squamous cell carcinoma.
- ▶ It accounts for less than 1% of all oral cavity tumours.
- ▶ It has a unique clinicopathological profile with a polypoidal, pedunculated appearance.
- ▶ Histologically it stains for both epithelial and mesenchymal markers.
- ▶ Aggressive surgical treatment with or without radiotherapy with close follow-up is essential to treat this tumour.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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