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SPINDLE CELL CARCINOMA OF MANDIBLE – A CASE REPORT

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ABSTRACT Spindle cell squamous carcinoma (SpCC) is an exceedingly rare variant of squamous cell carcinoma (SCC) with unique clinicopathological characteristics. SpCC of the head and neck is a rare, biphasic neoplasm first described by Virchow (1865). It is composed of SCC, either in situ and/or in invasive form, and a malignant spindle cell component with a mesenchymal appearance, but of epithelial origin. It compromises less than 1% of all oral cavity tumours, and it has a site predilection for the alveolar mucosa, tongue, buccal mucosa, and lower lip. SpCC exhibits similar demographics to the conventional squamous cell carcinoma, with a higher prevalence in males but primarily in the 5th and 6th decades of life. Here, we present a case of SpCC of the posterior part of mandible in the left side in a 50-year-old male which had a rapid growth.

KEYWORDS : Rare, Carcinoma, spindle cell.

INTRODUCTION

Spindle cell squamous carcinoma (SpCC) is an exceedingly rare variant of squamous cell carcinoma (SCC) with unique clinicopathological characteristics. (1) SpCC may arise from numerous areas throughout the body, such as the aerodigestive tract, salivary glands, breast, skin, urogenital tract, and gastrointestinal tract. In the head and neck region, the larynx is the predominant site of occurrence followed by the oral cavity, pharynx, and sinonasal tract. SpCC has been called by various names, including pseudo sarcoma, carcinosarcoma, pleomorphic carcinoma. (2) In the oral cavity, SpCC compromises less than 1% of all oral cavity tumours, and it has a site predilection for the alveolar mucosa, tongue, buccal mucosa, and lower lip. (3) The spindle cell components in SpCC are either modified growth pattern of squamous cells associated with a non-neoplastic mesenchymal reaction or a malignant compound composed of epithelial and mesenchymal neoplasms. One histopathological feature used to identify SpCC is poorly differentiated squamous carcinoma including simultaneous sarcomatoid transformation demonstrated by the presence of malignant fusiform cell proliferation. (4) The current article describes a case of SpCC involving the mandible with rapid growth.

Case Report

A 50-year-old male patient presented with a chief complain of a growth present in the left posterior part of the alveolar region of the mandible for 1 month. He complained of pain, and some degree of trismus with occasional episodes of bleeding from the tumour. The lesion grew to that extend within the last one month prior to consultation. There is history of extraction of 38 about 3 weeks back.

On extra oral examination a diffuse swelling is present on the left side of face involving the left cheek region, lower border of mandible causing gross facial asymmetry. The left submandibular lymph nodes are palpable, hard in consistency, fixed. He had no history of any medical illness.

Fig 1- External Profile

On intraoral examination he had foetor ex ore. There was a large fungating mass in the left alveolar measuring 3cm x 2.5cm in its largest diameter. The buccal mucosa and the floor of mouth in the vicinity of the tumour were spared. The growth appears to be erythematous with lobulated surface. On palpation the growth is firm in consistency, ill-defined margins, induration present over the lingual sulcus area, attached to the underlying structure, bleeds upon palpation.

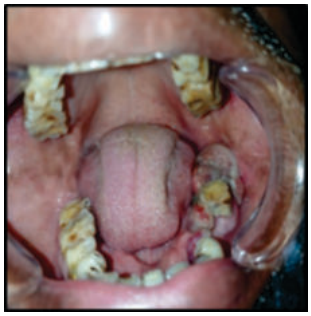

Fig 2- Intraoral Findings

The CECT of Head and Neck revealed there is a soft tissue swelling medially and laterally around the alveolar region and shows contrast enhancement. The lesion measures 31 x 28mm (axial) and 22mm (height). There are sub-centric lymph nodes noted on left side of the neck.

An intraoral incisional biopsy was performed. Microscopic examination of sections revealed haphazard arrangement of few malignant spindle cells.

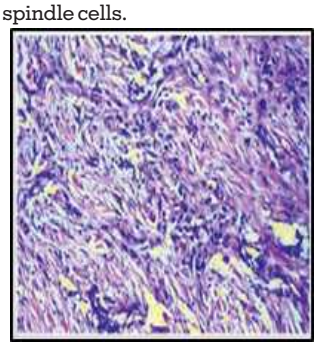

Fig 3- Histopathology Picture

He underwent surgery to remove the tumour and left modified neck dissection was performed. Patient underwent radio therapy 2 Gy 30 cycles, 5 times a week for six weeks. Patient is under periodic follow up.

DISCUSSION

Spindle cell neoplasms comprise a diverse collection of benign and malignant tumours. (5) Spindle cell carcinoma is very rare with a reported incidence of less than 1% of all tumours of oral regions and 3% of Squamous cell carcinoma. It is considered a biphasic malignant tumour, as it has spindled or pleomorphic tumour cells which simulate a true sarcoma but of epithelial origin. (6)

Spindle cell carcinoma is an unusual form of poorly differentiated squamous cell carcinoma (SCC) consisting of elongated (spindle) epithelial cells that resemble a sarcoma. The term 'spindle cell carcinoma' was first applied by Shervin et al. (7)

The mean age of diagnosis is in the sixth decades of life, but it can be diagnosed in younger age group and older age group (range 29 -93).

Growth of this tumour is exophytic polypoid or pedunculated in 98.9% of cases. It can also be sessile, nodular, or endophytic. The present case showed exophytic fungating mass.

Histologically, Spindle cell carcinoma exhibits both epithelial cell component and sarcomatoid or spindle cell component. While spindled component usually predominates, the squamous component is either focal dysplasia, carcinoma in situ or invasive SCC. Spindle cell carcinoma is a biphasic tumor composed of surface epithelial changes varying from mild dysplasia to invasive carcinoma in association with, and usually dominated by, an abundant dysplastic-appearing spindle cell-component. (5)

Differential diagnosis ranges from benign to malignant lesions, such as fibromatosis, reactive epithelial proliferations, fibrosarcoma, rhabdomyosarcoma and malignant melanoma. (6)

Epithelial markers include keratin (AE1/AE3, CK 1,8,9), epithelial membrane antigens, KI, and K18. The most sensitive and reliable ones are keratin and epithelial membrane antigen. They are helpful in differential diagnosis from other sarcomatous lesions. Mesenchymal markers include vimentin, desmin, S-100, Osteopontin and BMP. (3) In this case we have found AE1/AE3, CK 1, vimentin, desmin, S-100 positivity.

The treatment option in SpCC is that wide radical resection with radiotherapy. (1)

CONCLUSION

Spindle cell carcinoma of head and neck is a rare and unique subtype of squamous cell carcinoma. It mimics other connective tissue sarcomas & spindle cell malignancies at light microscopic level. Immunohistochemistry is helpful to know the histogenesis and nature of SpCC. The prognosis of disease is controversial. Patients whose tumours are deeply invasive tend to have a poor prognosis, whereas those with early-stage tumours have an excellent prognosis.

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