INTERNATIONAL JOURNAL OF CURRENT ADVANCED RESEARCH
ISSN: O: 2319-6475, ISSN: P: 2319-6505
Available Online at www.journalijcar.org
Volume 14; Issue 05; May 2025; Page No.217-219
DOI: http://dx.doi.org/10.24327/ijcar.2025.219.0046

Subject Area : ONCOLOGY

ACANTHOLYTIC SQUAMOUS CELL CARCINOMA AT RETROMOLAR PAD: A RARE CASE REPORT

[1]Dr. Anasuya Bhattacharjee and [2]Dr. Tamughna Das

[1]Consultant Periodontist and [2]Consultant Forensic Odontologist,ILS Hospitals, Agartala Branch

ARTICLE INFO

Received 14th April 2025
Received in revised form 28th April, 2025
Accepted 15th May, 2025
Published online 28th May, 2025

Key words:

Oral cavity, Acantholytic, Hyperchromatic nucleus, Mucin stain, γ2-chain.

ABSTRACT

Acantholytic or Adenoid squamous cell carcinoma is a rare variant of squamous cell carcinoma. Whenever it is reported at the head and neck region, the sites are always the Sun-exposed areas. Retromolar pad area of mandible is one of the rarest sites for acantholytic squamous cell carcinoma. It is also documented that, the prognosis of this variant inside oral cavity is very poor. In this case report, this unusual variant will be discussed at a rare site of the oral cavity.

INTRODUCTION

The acantholytic variant of Squamous cell carcinoma generally occurs on the sun exposed areas of adults. Its occurrence inside the oral cavity is very rare and confers bad prognosis. This variant was first described by Lever in 1947. One such classical scenario in a 68-year-old male patient got reported in a well known superspeciality hospital of Agartala city.

CASE REPORT

A 68-year-old male presented with an extremely painful, erythematous ulcerative growth in the lower right back region of oral cavity for the last 3 months. Upon taking history, the patient gave history of cigarette smoking in the last 35 years and chewing of tobacco products for 20 years. On examination there was a 5 × 3 cm ulcero-proliferative growth on the right mandibular alveolar mucosa. The lingual aspect of the lesion had an irregular margin and a necrotic base. After clinical examination and hearing out about detailed history of using tobacco products, the patient was asked to get Segmental CBCT of mandible done.

Cone beam computed tomography (CBCT) scan ofmandible for assessment of pathology revealed an ill-defined radiolucency located in the right mandibular region in relation to tooth number 45, 46, 47, 48. The extent of the lesion is superio-inferiorly from alveolar crest till IAN canal, mesiodistally from mesial of 46 till middle third of ramus, bucco-linually from buccal cortical plate till lingual cortical plate. Ill defined, ragged borders were also evident from the scan.

*Corresponding author: **Dr. Anasuya Bhattacharjee**

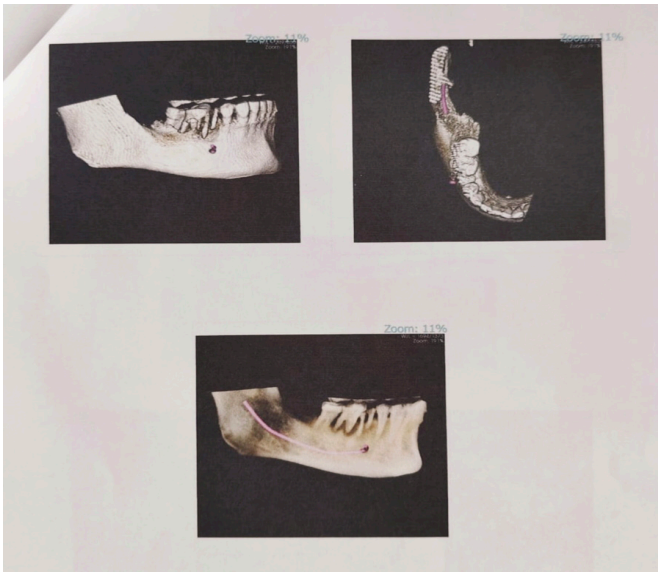
BDS, MDS (Periodontology) Consultant Periodontist ILS Hospitals, Agartala.

Figure 1. Patient's photograph revealing the growth in the oral cavity.

This growth destructed the superior cortex of IAN canal, floating tooth appearance is seen in relation to 46, 47; perforation of buccal and lingual cortical plates is also quite evident. So, all these radiographic findings are indicating likeliness of having some malignant lesion in the region of 45, 46, 47, 48 and right side of the ramus.

Excisional biopsy was performed and histopathological examination revealed nests of malignant squamous cells revealing acantholysis in the center and focal pearl formation giving pseudo glandular/alveolar appearance. Tumor cells at the pe-

riphery of nests were showing pleomorphism, enlarged, irregular hyperchromatic nucleus, densely eosinophilic cytoplasm and frequent mitotic figures. Focal areas of typical squamous cell carcinoma were also found. The tumor was diagnosed as Acantholytic Squamous Cell Carcinoma (ASCC).



DISCUSSION

Acantholytic variant of SCC is a histologically distinct variant of squamous cell carcinoma that appears most commonly in areas of the skin exposed to the ultraviolet radiation of the Sun. It is rare on mucosal surfaces of the upper aerodigestive tract.[1] This well-recognized variant of squamous cell carcinoma was first described by Lever in 1947. Although, the World Health Organization (WHO) defined ASCC as an original entity since a long time.[2, 3]There are very a smaller number of cases (less than 30 cases) of A-SCCs documented in the international literature so far.[4]

Other names of Acantholytic SCC are: Adenoid squamous carcinoma, Pseudoglandular squamous cell carcinoma, squamous cell carcinoma with glandlike (adenoid) features, angiosarcoma-like squamous cell carcinoma, adenoacanthoma, pseudo vascular adenoid squamous cell carcinoma and pseudo-angiosarcomatous carcinoma. It differs from common squamous cell carcinoma in histologic features and its aggressive nature. Microscopically, the tumor shows cystic degeneration of the neoplastic epithelium, producing a prominent alveolar pattern and pseudo glandular structures with acantholytic cells. This finding is associated with loss of immunohistochemical expression of E-cadherin, causing loss of cell adhesion in the center of the tumor nests.[5] The peak incidence of the oral ASCC is in the sixth decade.[6] These tumors may have an association to previous exposure to ionizing radiation.[7] It occurs most commonly on the lips, although, arising from the intraoral structures are very rare.[8]

A-SCC is differentiated from adenocarcinomas particularly, adenosquamous carcinomas by absence of true glandular formations and negativity for mucin stains. ASCC can mimic adenoid cystic carcinomas due to the presence of glandular spaces and fibrin in these spaces may masquerade as mucin. However, in ASCC the glandular spaces often have angular appearance and mucin stains do not show evidence of epithelial mucin. ASCC is almost always accompanied by foci of conventional SCC, suggesting the correct diagnosis. In addition, adenosquamous carcinomas show only focal glandular formations, whereas ASCC show pseudo glandular formations throughout the lesion. If these lesions are perceived as glandular and a squamous component also is identified, mucoepidermoid carcinoma (MEC) may enter the differential diagnosis. Low and intermediate grades of MEC show easily definable mucin and rounded glandular spaces. High grade MEC never has abundant glandular formations. Although, angiosarcoma and ASCC are completely different tumor entities, their histological features are similar and defined by intratumoral spaces. Formation of anastomosing spaces and channels in ASCC closely mimics angiosarcoma.

Interestingly both tumor entities show comparable clinical appearance in the oral cavity. The peak incidence of angiosarcoma is the seventh decade and the peak incidence of the oral ASCC is the sixth decade. Macroscopically both entities located in the oral cavity are fast growing, eruptive lesions and have poor prognosis.[7,9] Like all oral squamous cell carcinomas, ASCC show male predilection of 1-3.5 whereas no sex predilection of oral angiosarcoma is known. Angiosarcoma and ASCC do not only share identical clinical features and a similar histopathological pattern in common histological staining but also show overlaps of cytokeratin-expression and of expression of vascular differential markers. Expression of Fli-1 in angiosarcoma and cytoplasmatic immunoreaction for γ2-chain of ln-5 in ASCC are worked out as distinguishing features of both entities. ASCC differs from common squamous cell carcinoma not only histologically but also by its aggressive nature.

CONCLUSIONS

Acantholytic or adenoid squamous cell carcinomas have to be differentiated from certain specific salivary neoplasms, like those which usually occurs at the floor of the tongue (cylindromas or mucoepidermoid carcinomas). ASCC of the oral sites should also be limited from adenosquamous carcinomas, which has its combined features of adeno-carcinoma and SCC.Although, SCC and Acantholytic SCC are having very similar kind of histological features, SCC expresses specific protein known as 'Fli 1 protein', whereas Acantholytic variant doesn't show up for this protein. The main challenge with this acantholytic variant is that, there are very few documented cases of ASCC in the literature, that's why the typical biological features of this variant and its definitive treatment plan as well as prognosis are not properly conclusive in nature. However, majority of the histopath-scholars agreed upon its feature of higher recurrence and metastatic potential than those classical SCCs. So, aggressive treatment and long-term regular follow up visits to the doctor's office are mandatory for the complete elimination of this variant.

References

1. Kerawala CJ. Acantholytic squamous cell carcinoma of the oral cavity: A more aggressive entity? Br J Oral Maxillofac Surg 2009;47:123-5.
2. Cardesa A, Zidar N, Alos L. Acantholytic squamous cell carcinoma. In: Barnes L, Eveson JW, Reichart P, Sidransky editors. World Health Organization Classification of Tumours Pathology and Genetics of Head and Neck Tumours. 1st ed. Lyon: D IARC Press;

2005. p. 129.

3. Pindborg JJ, Reichart PA, Smith CJ, WaalI V. Adenoid squamous cell carcinoma. In: Pindborg JJ, Reichart PA, Smith CJ, van der Waal I, editors. WHO histological typing of cancer and precancer of the oral mucosa. 2nd ed. New York: Springer; 1997. p. 15.
4. Driemel O, MüllerRichter UD, Hakim SG, Bauer R, Kleinheinz J, et al. Oral acantholytic squamous cell carcinoma shares clinical and histological features with angiosarcoma. Head Face Med 2008;4:17.
5. Zidar N, Zupevc A, Gale N, Dovsak D. Pseudovascular adenoid squamous-cell carcinoma of the oral cavity-a report of two cases.J Clin Pathol 2006;59:1206-8.
6. Driemel O, Braxein K, Pistner H, Kosmehl H. Orales adenoid squamöses carcinoma. Tumor markers and prognosis. Mund Kiefer Gesichtschir 2004;8:118-22.
7. Cawson RA, Binnie WH, Speight PM, Barrett AW, Wright JM. Uncommon type of carcinoma. In: Cawson RA, Binnie WH, Speight PM, Barrett AW, Wright JM, editors. Lucas's pathology of tumors of the oral tissues, 5th ed. London: Churchill Livingstone; 1998. p. 241-8.
8. Papadopoulou E, Tosios KI, Nikitakis N, Papadogeorgakis N, Sklavounou-Andrikopoulou A. Acantholytic squamous cell carcinoma of the gingiva: Report of a case and review of the literature. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2010;109:e67-71.
9. Batsakis JG, Huser J. Squamous carcinomas with glandlike (adenoid) features. Ann Otol Rhinol Laryngol 1990;99:87-8.

How to cite this article:

Anasuya Bhattacharjee and Tamughna Das. (2025). Acantholytic Squamous Cell Carcinoma at Retromolar Pad: A Rare Case Report, International Journal of Current Advanced Research, 14(05), pp.217-219.

****