ISSN: 2581-5989
PubMed - National Library of Medicine - ID: 101738774

International Journal of Dental Science and Innovative Research (IJDSIR)

IJDSIR : Dental Publication Service

Available Online at: www.ijdsir.com

Volume – 2, Issue – 4, July – August - 2019, Page No. : 06 - 10

Basal Cell Adenocarcinom in Minor Salivary Gland: Case Report with Its Histopathologic Differentional Diagnosis.

[1]Dr Deepa Hugar, Reader, Dept of Oral and Maxillofacial Pathology, Albadar Dental College and Hospital, Gulbarga, Karnataka, India

[2]Dr .Shashiranjan, Reader, Dept of Oral and Maxillofacial Pathology.

[3]Dr. Santosh Hugar, Professor, Department of Conservative and Endodontics, Bharatiya Vidyapeeth Dental college and Hospital, Sangli, Maharashtra.

[4]Dr Sangameshwar Sajjanshetty, Reader, Department of Pedodontics and Preventive Dentistry, H.K.E.S's S.N.D.C, Gulbarga, Karnataka

[5]Dr .Zuveria Arshi, Senior Lecturer, Dept Oral and Maxillofacial Pathology, Albadar Dental College and Hospital, Gulbarga, Karnataka.

Corresponding Author: Dr Deepa Hugar, Reader, Dept of Oral and Maxillofacial Pathology, Albadar Dental College and Hospital, Gulbarga, Karnataka, India

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Minor salivary gland neoplasm constitutes upto approximately 25 % of all salivary gland tumours. Basal cell adenocacinoma is a rare salivary gland tumour which is considered to be malignant counterpart of basal cell adenoma.BCAC is accounting for only the 2.9% of malignant salivary neoplasms.It affects predominantly the major glands and there are very few reports of lesions in minor glands. In this case report we describe a case of a middle aged woman presenting with basal cell adenocarcinoma of a hard palate, minor salivary gland and its histopathologic differential diagnosis.

Keywords: Basal cell adenocarcinoma, minor salivary glands and histopathogic differential diagnosis.

Introduction

The Basal cell adenocarcinoma were first recognized in 1978 and account for approximately 1.6% of all salivary gland neoplasm[1]. Recently it is added to the subtypes of salivary gland carcinoma and was included in the 1991 World Health Organization classification of salivary gland neoplasms [2]. The 99% of cases reported are in major glands, usually parotid, in the submandibular gland and in sublingual gland [2]. Very few cases have been reported in minor salivary glands of the buccal mucosa, labial and palate mucosa as in our case.

Case Report

A 35 years –old female patient presented with a chief complaint of pain and swelling involving the right side of palate that had enlarged slowly for 8 months. Intraoral examination revealed a solitary swelling measuring about 1x 1 cm. diameter, painfull, lobulated mass with well defined borders and normal overlying mucosa (Figure 1). No neck masses or palpable lymph nodes were noticed. No clinical signs of malignancy were present. The radiographic findings were not significant. The clinical impression was that this was a salivary gland neoplasm.

Following local excision(Figure.2) histological examination with H& E staining revealed an unencapsulated salivary gland neoplasm consisting of two forms of epithelial cells, one form is small basaloid cells with basophilic cytoplasm and hyperchromatic nuclei, and other form is larger polygonal to elongated cell with eosinophilic/amphophilic cytoplasm and large pale basophilic nucleus. The small dark cells are located peripherally to the larger pale cells and have produced palisading of nuclei of cells along the epithelial stromal interface (Figure.3 &4). Eosinophilic hyaline material was distributed as small foci among the tumour cells / forming thick band at periphery of tumour cells nests/ cords (Figure.5).The neoplasm showed all four morphological patterns like solid,trabecular , tubular and membranous with focal areas of necrosis and hemorrhage(Figure. 6) . The solid pattern is characterized by contiguous tumour cells arranged in islands and masses within the fibrous connective tissue stroma. The trabecular type is characterized by anastomosing cords and bands of basaloid epithelial cells which may be linked to the configurations shaped like Chinese characters. Small lumina or pseudolumina characterize the tubular form .A thick, eosinophilic hyaline lamina that is seen surrounding strands or cords and separating tumour nest characterizes the membranous pattern.

Perineural infiltration was evident(Figure. 7). Based on these histological features diagnosis of basal cell adenocarcinoma of minor salivary gland was given.

Discussion

Lo et al were the first to report basal cell adenocarcinoma in the minor salivary gland .BCAC is uncommon in the minor salivary glands.Ninety percent of cases reported are in major salivary glands, usually parotid, in the submandibular gland and in sublingual gland[4]. Very few cases have been reported in minor salivary glands of the palate, buccal mucosa and labial mucosa as in our case[4] .The reports suggest that BCAC most commonly affects individuals in the sixth decade of life, which is inaccordance to the present case. No sex predilection is seen [4]. Most commonly reported clinical symptoms are painless swelling of long duration with normal overlying mucosa[4] .From the aforementioned symptoms pain ,swelling were noted in the p resent case.

BCAC is believed to arise from pluripotent ductal reserve cells.BCAC has four major histologic growth pattern, solid, tubulotrabecular, cribriform and membranous. The most common architectural presentation is as the solid form, with membranous, tubular and trabecular forms being less frequent. The solid pattern most likely to present with perineural invasion, through the prognostic significance of perineural invasion in BCAC is unknown [6].The major histopathological differential diagnostic considerations are basal cell adenoma ,solid pattern adenoid cystic carcinoma, polymorphous low grade adenocarcinoma , basaloid squamous cell carcinoma small cell undifferentiated carcinoma, canalicular adenoma [7]. Incisive tendency and increased mitoses distinguishes this neoplasm from basal cell adenoma. BCAC can be confused with solid adenoid cystic carcinoma. The absence of ductal cell population composed of light and dark cells, presence of cells with scanty cytoplasm with angular hyperchromatic nuclei and a cribriform configuration distinguish it from basal cell adenocarcinoma.Basal lamina and glycosaminoglycan containing intercellular spaces can develop in basal cell adenocarcinoma. but hyaline droplets are only features of BCAC.In polymorphous low grade adenocarcinoma growth pattern donot show regular and mosaic like organization of solid and membranous variants of basal cell adenocarcinoma.In the tubule-trabecular subtype of basal cell adenocarcinoma luminal and nonluminal cells

are readily apparent at least focally, but ductal structures in polymorphous low grade adenocarcinoma appear to be composed of single type of tumour cells.Cellular and nuclear features generally are more variable in basal cell adenoarcinomas as compared to polymorphous low grade adenocarcinoma. Peripheral palisading is not a feature of polymorphous low grade adenocarcinoma[7].

Small cell undifferentiated carcinoma, when small basaloid tumour cells predominate in basal cell adenocarcioma small undifferentiated carcinoma must be excluded.Ductal differentiation and themosaic like organization of tumour cell nests, with or without peripheral palisading, which is characterstic of basal cell adenocarcioma.Tumour cells are more circumscribed compared to the very infiltrative nature of foci of tumour cells in small cell undifferentiated carcinoma [7].

Conclusion

Basal cell adenocarcinoma is a lowgrade malignancy and local recurrence has been previously reported.Metastasis is rare with a few lesions spreading to lymphnodes and one to the lung.The solid type appears to have the highest risk of metastasis.There was no evidence of metastasis in our case.As primary treatment for minor glands is has wide excision with follow up radiotherapy on the basis of higher likelihood of neural and vascular invasion. Further studies concerning the clinical behavior of BCAC of minor salivary glands after primary treatment including radiation therapy is necessary.If BCAC is radiosensitive, conservative surgery for BCAC in minor salivary glands may be a viable option.

Abbreviations

BCAC - Basal Cell Adeno Carcinoma

References

1. Geetanjali Gupta,Reecha singh et al .Basal cell adenocarcinoma in the tongue.Clinical medicine insights oncology .2010:4: 127-131.
2. Ruchi Sharma, Susmita Saxena et al .J of oral and maxillofacial pathology. 2007.volume 11.2.56-59.
3. Tisha Farrell, Yilan L et al . Basal cell adenocarcinoma of minor salivary gland . Arch Pathol Lab Med. 2007: 131:1602-1604.
4. Athanasios K,Poulopoulos et al. Basal cell adenocarcinoma of minor salivary gland case report and cell adhesion molecule immunocytochemical profile. .2005.41.50-153.
5. Bryan k ward , Raja R seethala et al . Basal cell adenocarcinoma of a hard palate minor salivary gland : case report and review of the literature. Head and Neck Oncology 2009:1:4.
6. Ellis GL, Auclair PL .Basal cell adenocarcinoma : Major problems in pathology, surgical pathology of salivary glands. WB Saunders company : 1991.vol 5.p.441-54.

Legends Figures

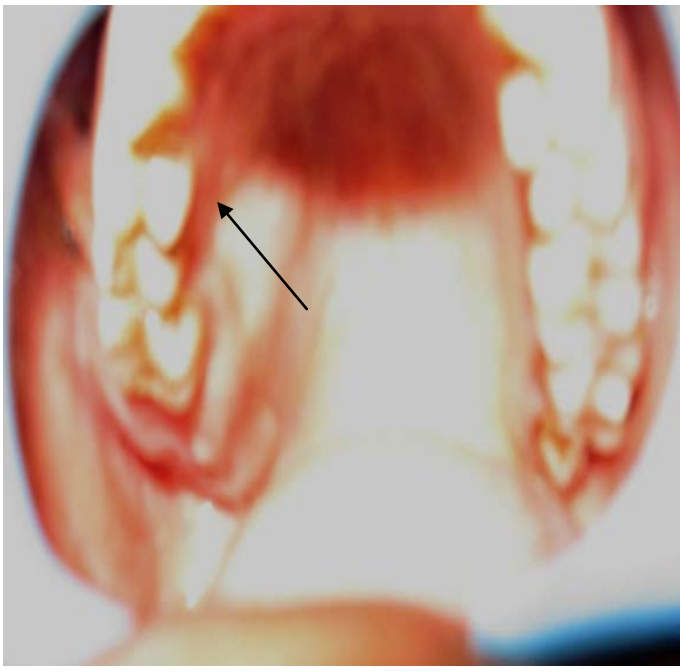

Figure 1: A swelling seen on the right palatal mucosa.

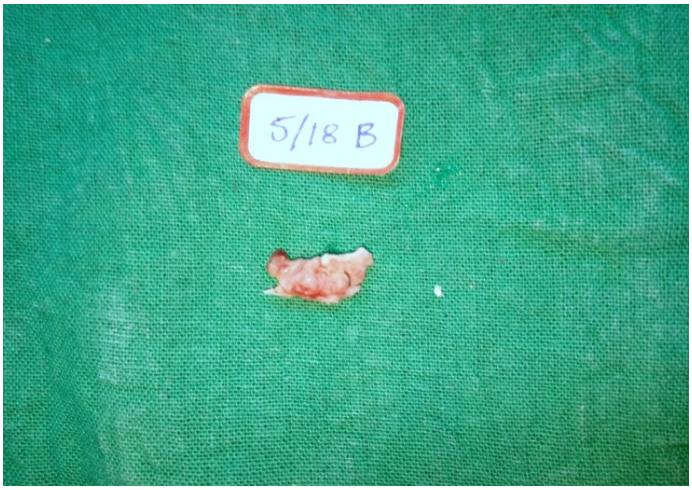

Figure 2: Excised Specimen

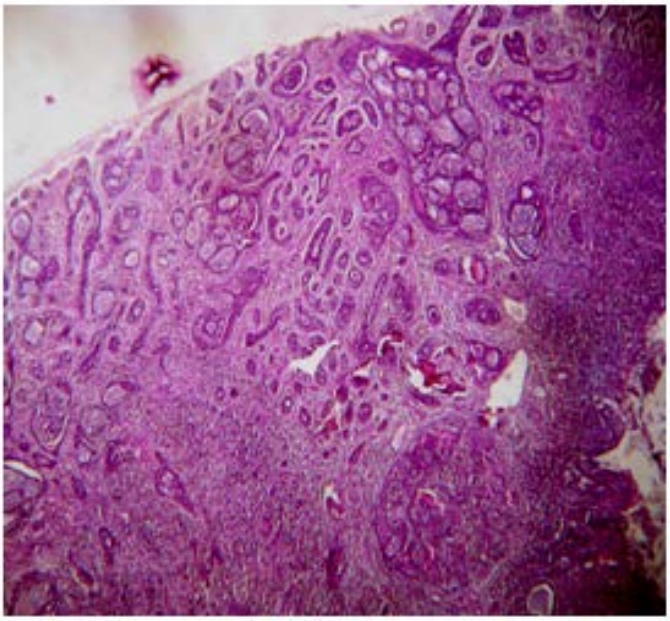

Figure 3: Histopathological examination shows proliferation of basaloid cells in the form of sheets and strands . (H&E 10 X).

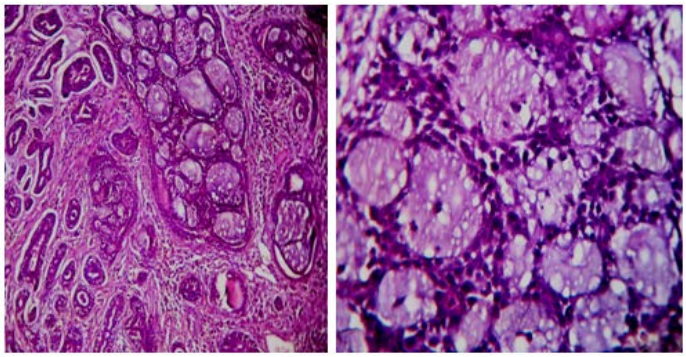

Figure 4 : Tumour with tubular pattern composed of centrally placed large polygonal cells with a moderate amount of cytoplasm and peripherally placed smaller cells with modest amount of cytoplasm and dense nuclei(H&E 10x, 40xrespectively) .

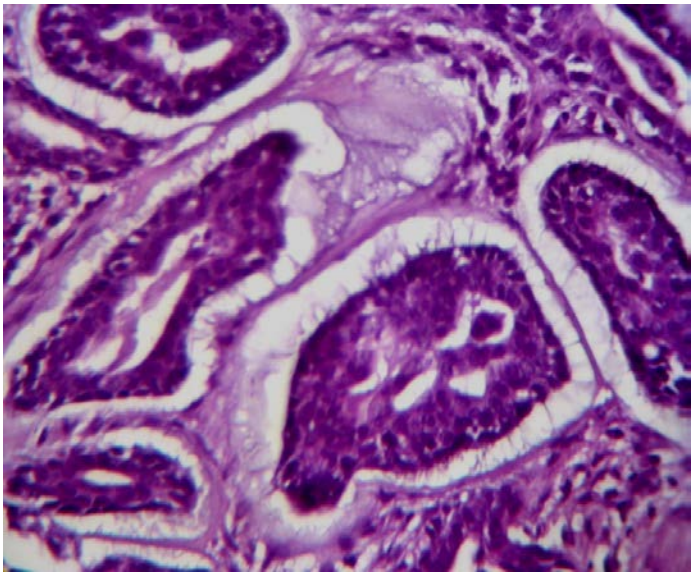

Figure 5 : Eosinophilic hyaline material distribution as small foci among the tumor cells and forming thick band at periphery.(H&E 40X)

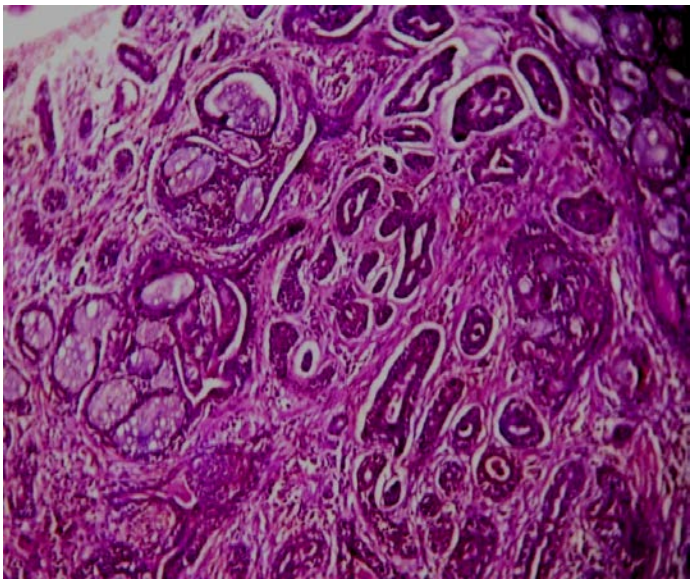

Figure 6 : Tumour cells showing different morphologic patters like solid ,trabecular, tubular and membranous.(H&E 40X)

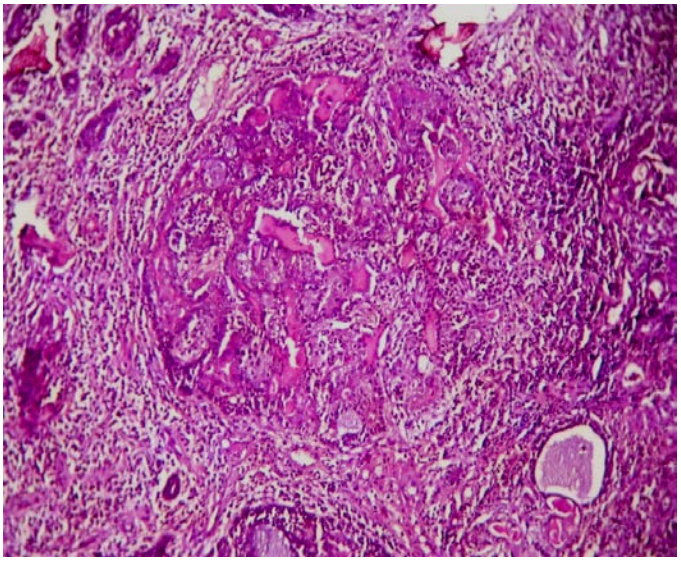

Figure 7: Peri neural invasion by tumor cells (H&E 40X).