

Photoclinic

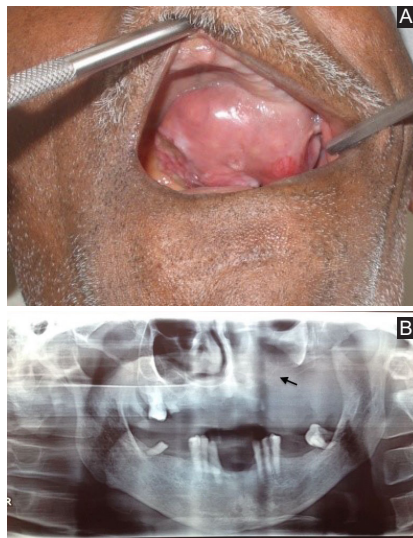


Figure 1. A) Image of palatal swelling crossing the midline and postero-medially showing erythematous to ulcerated areas. B) Orthopantomograph showing radiolucency in the left maxilla and maxillary sinus area, along with the displacement of nasal septum [Indicated by an arrow].

A 65-year-old male patient presented with a chief complaint of swelling over the palate for the past 20 years. The patient gave a history of extraction of teeth 20 years ago. A gradual increase in the size of the lesion was noted post-extraction. The patient was a bidi smoker for 25 years and had quit the habit for the past one month. Intra-oral examination revealed a massive swelling involving the left palate and alveolar ridge. The lesion appeared erythematous to ulcerated, ranging from 6 cm × 4 cm in size and was firm on palpation (Figure 1A). Bilateral submandibular lymph nodes were enlarged but not tender to palpation. Radiographic examination revealed radiolucency involving the left maxilla that extended to involve the maxillary sinus. Destruction of the sinus along with displacement of the nasal septum was noted (Figure 1B). Histopathological evaluation of the lesion under scanner view revealed a mass of darkly stained tumor islands separated from the surface epithelium

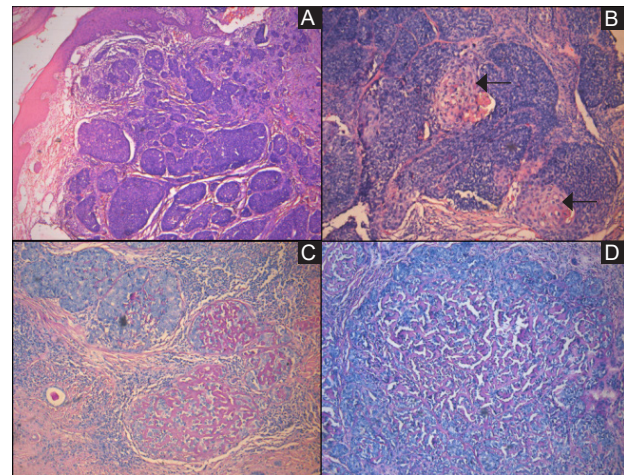


Figure 2. A) Lesional tissue comprising of closely placed large and small islands of basaloid cells with deeper areas showing thick collagen fibres (H&E; 4x). B) High power view of the basaloid islands with peripheral palisading and presence of squamous eddies in the centre [Indicated by arrows] (H&E; 40x). C & D) Extensive PAS-positive eosinophilic material within the cells, between and around the islands and within the ductal structures (PAS; 40x).

by a band of connective tissue (Figure 2A). Under higher magnification, the lesional tissue comprised of basaloid cells proliferating in the form of islands separated by hyalinized to basement membrane-like eosinophilic material (Figure 2B). In focal areas, squamous metaplasia was noted (Figure 2B, marked by arrows). The cells presented with a definite pattern of arrangement with the small collaring cells appearing hyperchromatic with triangular to a flattened nucleus; while larger cells were vesicular cells and centrally placed. Few areas showed formation of a lumen. Mitotic figures, 5–6 per high power field, were noted. A focal area of necrosis was seen. PAS positivity was noted in the areas surrounding the tumor islands and in areas surrounding the cells centrally (Figures 2C and 2D).

**What is your diagnosis?
See the next page for your diagnosis.**

Received: August 30, 2018, Accepted: November 6, 2018, ePublished: January 1, 2019

Karishma M. Desai, MDS^{1*}; Punnya V. Angadi, PhD¹; Alka D. Kale, PhD¹; Seema Hallikerimath, PhD¹

¹Department of Oral Pathology and Microbiology, KLE Academy of Higher Education and Research [KLE University], KLE VK Institute of Dental Sciences and Hospital, Belagavi- 590010, Karnataka, India.

***Corresponding Author:** Karishma M. Desai, MDS, PhD Research Scholar, Department of Oral Pathology and Microbiology, KLE Academy of Higher Education and Research [KLE University], KLE VK Institute of Dental Sciences and Hospital, Belagavi-590010, Karnataka, India. Tel: +91 9920833545; E-mail: drdesaikarishma@gmail.com

Cite this article as: Desai KM, Angadi PV, Kale AD, Hallikerimath S. Photoclinic. Arch Iran Med. 2019;22(1):57-58. www.SID.ir

Photoclinic Diagnosis: Basal cell adenocarcinoma

Basal cell adenocarcinoma (BCAD) account for 1.6% of all salivary gland tumors.^{1,2} BCAD predominantly affects the major salivary glands, the parotid gland being the most common (90%) followed by the submandibular gland.² Occurrence of BCAD in minor salivary glands is rare. The Armed Forces Institute of Pathology has classified BCAD as an epithelial tumor of major salivary glands with cytomorphologic features of basal cell adenoma but growth characteristics frequently associated with that of malignant neoplasms like infiltrative, perineural and intravascular growth.^{2,3} Although the histogenesis of BCAD is unknown, *de novo* origin or origin from a preexisting basal cell adenoma are postulated.²

Difficulty can be encountered in histologically differentiating the closely resembling lesions like basal cell adenoma, adenoid cystic carcinoma, basaloid squamous cell carcinoma, etc. from BCAD.^{4,6} BCAD is primarily diagnosed based on the presence of two cell types: small cells with minimal cytoplasm and dark staining nuclei seen at the periphery, and the larger cells with moderate amount of eosinophilic cytoplasm and pale oval nucleus.² The cells can be clustered as nests, sheets or islands of varying size and shape separated by collagenous stroma. The presence of PAS-positive basement membrane-like material and duct-like patterns aid in its categorization into a salivary gland neoplasm. Histologically, BCAD can present as membranous, trabecular, tubular and solid types. These patterns can coexist,^{2,7} as seen in the present case which showed features of both membranous and trabecular subtype along with focal areas of squamous metaplasia. The occurrence of squamous metaplasia in BCAD is a rare finding and could be attributed to its theory of development from a pre-existing basal cell adenoma.

Although low-grade, BCAD cases have shown recurrence in one-third of the reported cases.³ BCAD of the minor salivary glands may permeate to adjacent normal tissue more easily as compared to cases involving the major salivary glands.³ Thus, there is need to promote awareness regarding

regular oral screening, early management of lesions and follow-up of cases.

Authors' Contribution

Images and Data collection: KMD and PVA; Manuscript draft: KMD, PVA, ADK and SH; Revision and final manuscript preparation: KMD.

Conflict of Interest Disclosures

The authors have no conflicts of interest.

Ethical Statement

An informed consent was obtained from the patient for photographs, documentation and publication of this photoclinic.

Financial Support

None

References

- Ozgun A, Tuncel T, Emirzeoglu L, Haholu A. Basal cell adenocarcinoma of the parotid gland detected in a patient with breast cancer. *BMJ Case Rep.* 2014;2014. doi: 10.1136/bcr-2014-203791.
- Ellis GL, Auclair PL. Basal cell adenocarcinoma. In: Rosai J, Sobin LH, eds. *Atlas of Tumour Pathology; 3rd series, fascicle 17. Tumours of the Salivary Glands.* Washington, DC: Armed Forces Institute of Pathology; 1996:257-67.
- Wada T, Morita N, Sakamoto T, Nakamine H. Basal cell adenocarcinoma of the minor salivary gland: a case report. *J Oral Maxillofac Surg.* 2000;58(7):811-4. doi: 10.1053/joms.2000.7278.
- Poulopoulos AK, Andreades D, Epivatianos A, Antoniadis D. Basal cell adenocarcinoma of the minor salivary gland: Case report and cell adhesion molecules immunocytochemical profile. *Oral Oncology Extra.* 2005;41(7):150-3. doi: 10.1016/j.ooe.2005.03.006.
- Akiyama K, Karaki M, Hosikawa H, Mori N. A massive basal cell adenocarcinoma of the palatal minor salivary gland that progressed into the pterygopalatine fossa. *Int J Oral Maxillofac Surg.* 2012;41(4):444-7. doi: 10.1016/j.ijom.2011.10.013.
- Cuthbertson DW, Raol N, Hicks J, Green L, Parke R. Minor salivary gland basal cell adenocarcinoma: a systematic review and report of a new case. *JAMA Otolaryngol Head Neck Surg.* 2015;141(3):276-83. doi: 10.1001/jamaoto.2014.3344.
- Sarath PV, Kannan N, Patil R, Manne RK, Swapna B, Suneel Kumar KV. Basal cell adenocarcinoma of the minor salivary glands involving palate and maxillary sinus. *J Clin Imaging Sci.* 2013;3(Suppl 1):4. doi: 10.4103/2156-7514.112799.



© 2019 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.