

# Pleomorphic Adenoma Masquerading as Odontogenic Lesion in the Maxilla

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A 67-year-old male reported to the Faculty of Dental Sciences, MS Ramaiah University of Applied Sciences with the chief complaint of painful swelling in the upper right back region of the maxilla. The patient was apparently well three months ago when he developed a slow growing swelling associated with dull, continuous and non radiating pain.

Extraoral examination revealed a solitary, diffuse swelling on the right side of cheek that was irregular in shape. On palpation, the inspeitory findings were confirmed. The swelling was smooth, firm in consistency and non fluctuant.

On intraoral examination, the swelling was well-defined and extended from the distal aspect of right maxillary second premolar upto the maxillary tuberosity region measuring about 3 cm, with a buccal expansion of 1.5 cm and palatal extension of 1 cm [Table/ Fig-1a]. The color of the mucosa was normal.

Cone Beam Computed Tomography (CBCT) showed unilocular radiolucency with scalloped margins associated with impacted tooth #18 [Table/Fig-1b]. The lesion extended from the distal aspect of tooth #15 anteriorly, till the pterygoid plate posteriorly. Superiorly, it measured 1.5 cm and perforated the floor of the maxillary sinus. Buccal expansion of about 1.5 cm was seen. Medially, it extended 1 cm into the hard palate. With these features, a provisional diagnosis of Dentigerous Cyst (DC) was made.

The lesional tissue was exposed and separated from the overlying mucosa including the underlying buccal and palatal bone, under general anesthesia, through Weber Ferguson incision [Table/Fig-1c]. The lesion extended posteriorly up to the pterygoid plates. Superiorly, it had eroded the floor of the maxillary sinus. The lesional tissue was excised along with the offending impacted tooth. The resulting cavity was thoroughly debrided for any remnants and rough bony edges were trimmed. The buccal pad of fat was obtained through the incision made in buccal mucosa and relocated to cover the maxillary sinus opening. The closure of the mucosa was done using 3-0 vicryl sutures and 4-0 prolene sutures.

The excised gross specimen was brownish grey in color, round in shape and firm in consistency with thick wall measuring approximately 3x3 cm. The impacted tooth #18 with resorbed roots was present within the cystic cavity. Numerous vegetations were observed in the cystic lining. These macroscopic features closely resembled Adenomatoid Odontogenic Tumour (AOT) [Table/Fig-1d].

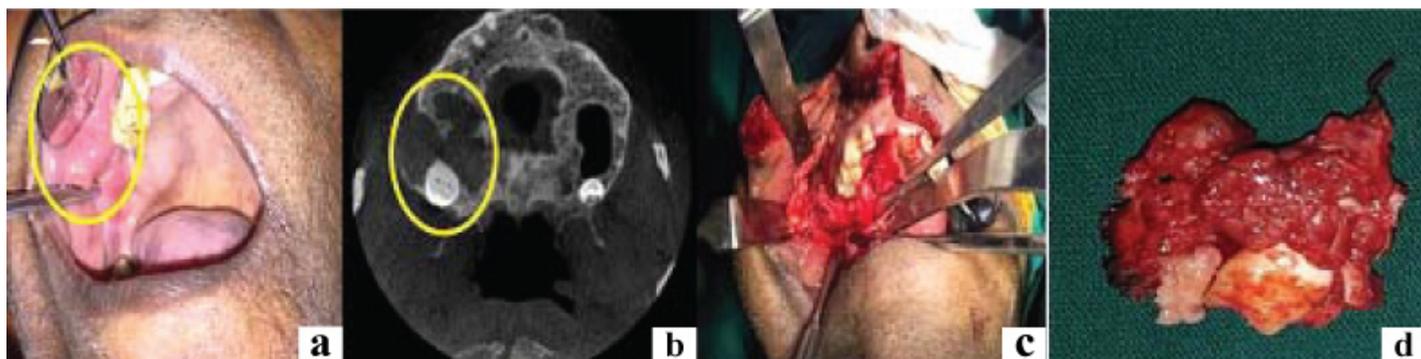
Microscopically, the H&E stained section showed an encapsulated tissue composed of myoepithelial cells proliferating in the form of sheets, strands, cords and duct-like structure. Myxoid, chondroid, osteoid like areas admixed with clear cells was observed arriving at the diagnosis of pleomorphic adenoma. [Table/Fig-2a-f]. An extensive surgical resection was done for the present case. Postoperative follow up was satisfactory and good healing was observed.

## DISCUSSION

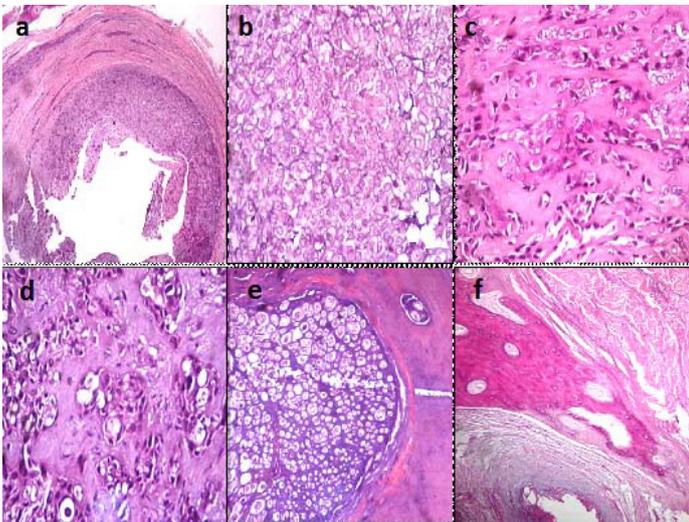
An imperative milieu in the field of oral pathology is created by diverse histology. Pleomorphic adenoma is a benign neoplasm of both major and minor salivary glands. Approximately, 80% of pleomorphic adenomas occur in parotid gland, 10% in submandibular gland and 10% in minor salivary glands [1]. The palate is a common intraoral site of occurrence and accounts for 42.8%-68.8% of cases followed by buccal mucosa, lips, floor of the mouth, gingiva and retromolar region [2]. Lateral extension of the tumour is a rare finding and only one such case has been reported in literature by Rout MR et al., whereas, the present case was extensive involving the palate, maxillary sinus and alveolus extending till the pterygoid plate associated with an impacted third molar, making this case unique and rare [3].

The atypical clinical and radiographic appearance of the present case was that of an odontogenic lesion. Radiographic differential diagnosis was DC due to the presence of unilocular radiolucency associated with an impacted third molar, which is an unusual finding that has not been previously reported in literature.

Combination of epithelial and myoepithelial cells in a mesenchymal background gives a greater diversity [4]. Almost, 1%-2% of clear cells



**[Table/Fig-1]:** a) Intraoral photograph showing a swelling in the right maxilla; b) Cone beam computer tomography showing unilocular radiolucency with scalloped margins associated with impacted tooth #18; c) Intra operative photograph showing the tumour mass being excised from underlying buccal and palatal bone; d) Photograph of gross specimen with vegetations in cystic space of tumour mass along with an impacted tooth depicting an AOT.



**[Table/Fig-2]:** H&E stained section showing; a) Encapsulation of tumour proper (10X); b) Presence of clear cells (40X); c) Sheets and cords of myoepithelial cells with hyalinization (40X); d) Ductal structures (40X); e) Chondroid like area (40X); f) Osseous like area (4X).

are exclusively seen in all salivary gland tumours [5]. In the present case, low-grade mucoepidermoid carcinoma was considered as a histopathological differential diagnosis. The other differential

diagnosis of pleomorphic adenoma includes basal cell adenoma, myoepithelioma, adenoid cystic carcinoma, mesenchymal tumours such as schwannoma and myxoma. Recently, Lombardi M et al., reported schwannoma-like pleomorphic adenoma in which the tumour showed a prevalence of schwannoma-like areas with focal epithelial components with tubular organization and modified myoepithelial cells [6].

Although the clinical and radiographic features of the present case indicated an odontogenic lesion, histopathology proved to be the gold standard facilitating the final diagnosis of an atypical pleomorphic adenoma.

## REFERENCES

- [1] Bordoy-Soto MA, Vélez-Gimón HJ, Hernández MF, Xavier-Briceño W. Giant pleomorphic adenoma of the palate. Case report and literature review. *Revista Odontológica Mexicana*. 2016 Dec 31;20(4):e252-7.
- [2] Moghe S, Pillai AK, Prabhu S, Nahar S, Kartika UK. Pleomorphic adenoma of the palate: report of a case. *Int J Sci Study*. 2014;2:54-6.
- [3] Rout MR, Mohanty D, Das CP. Cellular Pleomorphic adenoma of soft palate with lateral extension-a case report. *Indian J Appl Res*. 2016;5(8):51-3.
- [4] Rajendran R. *Shafer's textbook of oral pathology*. Elsevier India; 2009.
- [5] Said-Al-Naief N, Klein MJ. Clear cell entities of the head and neck: a selective review of clear cell tumours of the salivary glands. *Head and Neck Pathology*. 2008 Jun 1;2(2):111-15.
- [6] Lombardi M, Socciarelli F, Fini G, Leonardi A, Bartolazzi A. Schwannoma-like pleomorphic adenoma: a case report with review of the literature. *Head and Neck Pathology*. 2014 Jun 1;8(2):178-181.

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