

## Adenoid Cystic Carcinoma Of Palate

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**Abstract:** Adenoid cystic carcinoma is a malignant salivary tumor that may arise in either major or minor salivary glands. Because of its frequent microscopic appearance resembling cross-sections of tubular structures (cylinders), it was previously referred to as "cylindroma.". Clinically, adenoid cystic carcinoma is most common in the parotid gland, palate being the most common intraoral site.

**Keywords:** Cylindroma, Palate, Salivary gland

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### I. Introduction

Adenoid cystic carcinoma is a malignant neoplasm that may affect either the major or minor salivary glands of the oral cavity.[1,2] Adenoid cystic carcinoma was originally described by Lorain and Laboulbene in 1853. In 1859, Billroth suggested the name cylindroma. In 1930, Spies suggested the term adenoid cystic carcinoma to replace cylindroma and this name has been widely accepted. Until 1940s, the tumor was thought to be a benign variant of the mixed salivary gland tumor. In 1943, Dockerty and Mayo emphasized the malignant nature of this tumor.[1,3,4] Adenoid cystic carcinoma is a rare tumor of head and neck region. It accounts for <1% of all head and neck malignancies and about 4-10% of all salivary gland tumors. However, it is the commonest malignant tumor of the minor salivary glands.[1,3-7]

### II. Case report

A 60 year old female patient visited our clinic with the complaint of pain in the upper left back region of the jaw since one week. History of pain which was throbbing type, sudden, moderate in intensity, intermittent in nature, aggravates on swallowing food and relieved on medication (unknown). History of asymptomatic swelling since 1 year which was initially small in size which later increased in size. Patient gives history of mobile teeth in the same area. On further questioning she gave history of paralysis 2 years back and discontinued medication some 1 year back. On examination Submandibular and Superficial cervical lymph nodes are palpable, normal in consistency, size and are non-tender. Intraoral examination revealed well defined, bean shaped solitary swelling present on the left side of the palate measuring 5 x 3 cm extending anteroposteriorly from the rugae area to the area 1cm away junction of hard and soft palate. Borders are diffuse on the lateral aspect and well defined on its medial aspect. Mediolaterally from 5 mm below the palatal gingival margins of 23 to 28 to the midpalatineraphae with medial border being parallel with the midpalatineraphae. Overlying mucosa appeared to be of normal colour, texture and was intact [Figure 1]. Surrounding hard tissue examination revealed buccally shifted molars, generalized recession.

On palpation all the inspeactory findings with respect to size, shape, location and extent were confirmed. Swelling was sessile and fixed to the underlying structure. Swelling was tender, soft to firm at its anterior border where it was slightly fluctuant and firm to hard at its posterior border. Noncompressible, non-pulsatile without any bleeding on contact. Surrounding hard tissue examination revealed grade II mobility of 24, 25 with generalized pockets (4 - 5mm). Based on these features a diagnosis of Pleomorphic adenoma with a differential diagnosis of malignant salivary gland tumour was given.

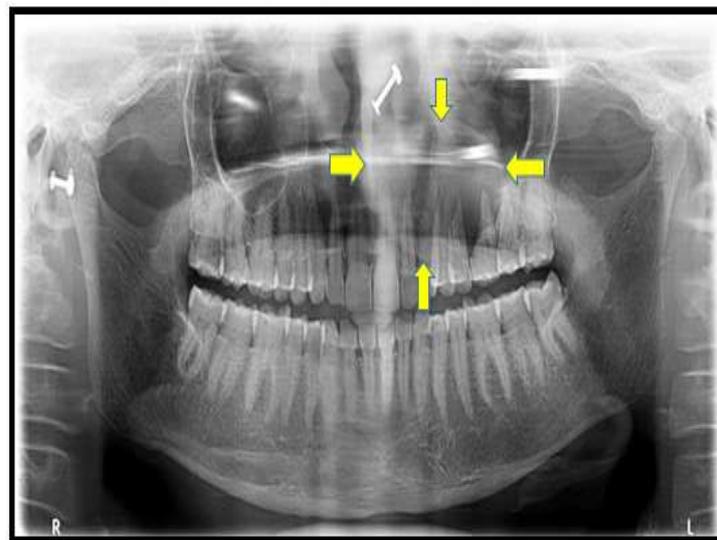


**Figure 1:** Solitary swelling on the left side of the palate.



**Figure 2:** IOPA and Occlusal radiograph revealing radiolucent lesion with spike type resorption of roots

On conventional radiographic examination, ill-defined radiolucency is seen extending from the canine to the second molar area and from the alveolar crest between 25, 26 upto the midline of the palate with spike type of root resorption wrt 24, 25, 26. Widened periodontal ligament space with loss of continuity of lamina dura wrt 24, 25, 26 [Figure 2,3]

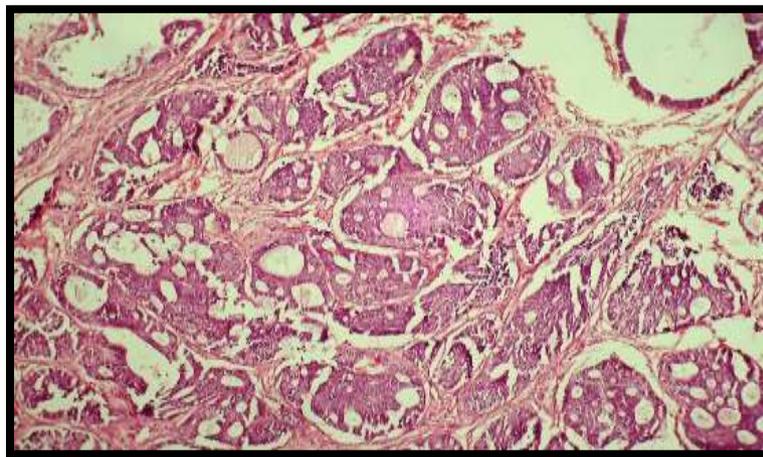


**Figure 3:** OPG reveals soft tissue shadows with root resorption of left upper premolars and first molar

Patient was advised for advanced imaging CT scan which revealed soft tissue expansile lesion seen involving the alveolar ridge area, maxillary sinus, zygomaticomaxillary complex and the nasal bones [Figure 4].



**Figure 4** – Coronal and Axial CT reveals expansile lesion seen involving the alveolar ridge area, maxillary sinus, zygomaticomaxillary complex and the nasal bones.



**Figure 5:** Histopathology

Biopsy was performed and on histologic examination, Lesional cells arranged in the form of islands separated by fibrocellular connective tissue. Islands show numerous pseudo ducts wherein some are filled with acellular, eosinophilic material, showing cribriform pattern. Lesional cells are isomorphic, round to oval in shape with hyperchromatic nucleus and scanty to moderate amount of cytoplasm [Figure 5]. Final diagnosis of Adenoid cystic carcinoma was given.

Hemimaxillectomy was performed with total radiotherapy dose of 60 Gy in 30 fractions (200 cGy/fraction for 6 weeks) and patient is on periodic checkups for the same [Figure 6].



**Figure 6:** Postoperative X ray

### **III. Discussion**

Adenoid cystic carcinomas make up about 6% of all salivary gland tumors and are the most common malignant tumors of the submandibular and minor salivary glands. They make up 15 to 30% of submandibular gland tumors, 30% of minor salivary gland tumors, and 2 to 15% of parotid gland tumors. Approximately 50% of adenoid cystic carcinomas occur in the minor salivary glands. The tumor affects men and women equally and usually occurs in the fifth decade of life [8]. In the present case benign looking swelling was present on the left side of palate in a 60-year old female patient. Radiographic examinations revealed radiolucent lesion on conventional radiographs and an expansile lesion on CT imaging. Hemimaxillectomy with radiotherapy were performed and patient is on regular checkups for the same. Adenoid cystic carcinoma of the minor salivary gland has a better prognosis than of major salivary glands because intra-oral lesions are diagnosed and treated earlier and therefore less likely to have advanced neural involvement and metastasis to regional or distant sites and the prognosis of adenoid cystic carcinoma of palate is reported to be better than the lesion located anywhere else.

### **IV. Conclusion**

Salivary gland neoplasms should be considered in differential diagnosis of lesions of the palate. Radiography plays an important role for diagnosis and also for the extent of the lesion. Biopsy should be performed for final diagnosis.

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