

Pleomorphic Adenoma of Buccal Mucosa: A Rare Case Report

Ashwini Jangamashetti, BDS¹, Siddesh Shenoy, MDS²,

R.Krishna Kumar MDS³, Amol Jeur, MS⁴

¹Post Graduate Student, Department Of Oral Medicine And Radiology, MARDC,Pune

²Reader, Department of oral Medicine and radiology, M.A Rangoonwala Dental College and Research Center, Pune (MARDC),

³Professor and HOD, Department of oral Medicine and Radiology, MARDC, Pune

⁴Assistant Professor in Department of General surgery, Krishna Medical College of KIMS Deemed University ,

Abstract: Pleomorphic adenoma is a benign tumor of the salivary gland that consists of a combination of epithelial and mesenchymal elements¹. About 90% of these tumors occur in the parotid gland and 10% in the minor salivary glands². Among intra oral pleomorphic adenomas buccal vestibule is among the rarest sites³. A case of pleomorphic adenoma of minor salivary glands in the buccal vestibule in a 36 year-old female is discussed⁴. It includes review of literature, clinical features, histopathology, radiological findings and treatment of the tumor, with emphasis on diagnosis⁴. The mass was removed by wide local excision with adequate margins⁵.

Keywords: minor salivary gland, pleomorphic adenoma, tumor, parotid gland, vestibule, mesenchymal elements.

I. Introduction

Pleomorphic adenoma (PA) is defined by World Health Organization in 1972 as a circumscribed tumor characterized by its pleomorphic or mixed appearance clearly recognizable epithelial tissue being intermingled with tissue of mucoid, myxoid and chondroid appearance². Among all salivary gland tumors, pleomorphic adenoma is the most frequently encountered lesion accounting for approximately 60% of all salivary gland neoplasms³. The palate is considered as the most common. Other rare sites include the throat (2.5%), retromolar region (0.7%), floor of the mouth and the alveolar mucosa⁵.

Pleomorphic adenoma is of glandular origin in the head and neck, usually presenting as a mobile slowly growing, painless firm swelling that does not cause ulceration of the overlying mucosa⁴. PA consists of cells with epithelial and mesenchymal differentiation (mixed tumor)⁶. The morphogenic complexity is because of differentiation of the tumor cells into fibrous, hyalinized, myxoid, chondroid, and even osseous tissue⁷. Patients with pleomorphic adenomas of minor salivary glands usually present in the fourth to sixth decades with a slight predominance in female patients⁷. The buccal vestibule is an uncommon site of occurrence for intraoral pleomorphic adenoma here, we report a case of pleomorphic adenoma in a 36 – year old female patient with characteristic clinical, imaging, histological features and treatment.

II. Case report

A 36 –years -old married female patient (Figure-1) came to the department of oral medicine and radiology with the chief complaint of swelling in the right buccal vestibule of 5 years duration (Figure-2). On clinical examination a swelling of approximate size of 1×2 cm, was noticed and deep proximal caries was seen with 16 (Figure-3.a). On palpation the swelling was firm, and mobile and tooth 16 was non tender. History of presenting illness revealed that the swelling was small in size to start with when noticed by the patient which gradually increased the present size. There was no history of fever, bleeding, pain, pus drainage and loss of sensation. The past dental history and medical history was unremarkable and no other abnormalities were found. The family history was not significant. On general physical examination patient had moderate built, height and well-oriented to time and place with all the vital signs are normal. The patient was advised for Hematological investigations, IOPA and USG. The hematological report was normal and USG revealed a mass of 16×10 mms with well defined hypoechoic to cystic lesion. Biphasic appearance consisting of epithelial component scattered amidst a chondromyxoid stroma. The epithelial cells are made up of cuboidal cells with a rim of cytoplasm and small darker staining myoepithelial cells (Figure-4). The cells are arranged in groups sheets and interdigitating strands forming small duct like structures at places. The tumour is partly capsulated. A small bit of fibrocollagenous tissue with dense wavy bundles of collagen and covered by hyperplastic stratified squamous epithelium is also seen. There is no evidence of malignancy in the present biopsy. Based upon history, clinical examination, laboratory investigations, ultrasound examination and histopathological findings

the final diagnosis is benign pleomorphic adenoma of minor salivary glands of right buccal vestibule. To report the recurrence of the lesion the patient is under regular follow up .

III. Discussion

Pleomorphic adenomas are benign heterogeneous tumors of salivary gland origin. In head and neck region they arise mainly in the major salivary glands mostly parotid (85%), submandibular gland (8%) and intra oral (7%) salivary glands³. The palatal glands are the most commonly affected with pleomorphic adenoma with a frequency ranging from 43% to 70% followed by the upper lip (10.1%) and cheek (5.5%). Other rare sites include the throat (2.5%), retromolar region (0.7%), floor of the mouth, and the alveolar mucosa⁷. This tumor usually presents as a unilateral, painless, slow growing mass in the parotid gland. Few cases are also reported as ulceration, pain, and bleeding⁷.

Minor salivary gland tumors are more common in females than males with a ratio ranging from 1.2:1 to 1.9:1 . The age range of patient varies from 9-90 years³ . The pleomorphic adenomas in youngsters will have similar biological characteristics as in adults but with low recurrence rates after surgical excision⁷ . The differential diagnosis of minor salivary gland pleomorphic adenoma of buccal vestibule includes fibroma ,lipoma ,buccal space abscess , foreign body, sebaceous cyst , dermoid cyst, hemangioma , neurofibroma ,rhabdomyoma, adenoid cyst ,carcinoma polymorphous ,low grade adenocarcinoma , The possibility of buccal space abscess was ruled out due to absence of sign of inflammation, hemangioma was ruled out by the absence of any bleeding. Dermoid cyst or lipoma was ruled out as there was no fluctuance. Malignancy was ruled out as there was no induration or fixity to underlying tissues⁷ .Absence of punctum and freely movable nature of the mass differentiat Pleomorphic adenomas from sebaceous cyst . As on histological picture both epithelial and myoepithelial cells were seen which rules out mucoepidermoid carcinoma .The negative slip test clinically and absence of lipomatous component histologically rules out lipoma. The absence of perineural invasion and mitotic figures obscure the chance of polymorphic low grade adenocarcinoma .There are three histological subtypes, myxoid (80% stroma), cellular (myoepithelial cells predominating) and mixed (classic). Pleomorphic adenomas is known to produce recurrence either due to spillage, inadequate removal or enucleation at the time of operation, but is not known to produce distant metastasis² . A recurrence rate of 2-44% has been reported in the literature . the ideal treatment of choice for Pleomorphic adenomas is wide local excision with good safety margins and follow –up of at least 3-4 years² .

IV. Conclusion

pleomorphic adenoma of the buccal vestibul is a rare neoplasm it needs to be diagnosed with a proper history and clinical enuclination complete wide surgical excision is the treatment of choice recurrence after many years of surgical excision as well as malignant transformation should be a concern and therefore long term follow up is necessary⁷.

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Figure-1



Female Patient

Figure-2



Swelling in the right buccal vestibule

Figure-3

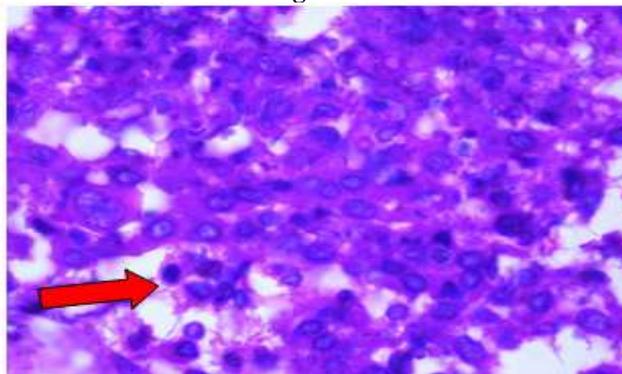


(a). Deep proximal caries



(b). Swelling of approximate size of 1×2 cm

Figure-4



Darker staining myoepithelial cells (red arrow)

Figure-5



After excision