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 – 5, Issue – 2, April - 2022, Page No. : 272 - 276

Cellular variant of pleomorphic adenoma of palate

[1]Dr. Ravipalli Raga Jyothsna, Intern, GSL Dental College and Hospital Rajamahendravaram – 533296 Andhra Pradesh India.

[2]Dr. Siva Ganesh Pampana, Reader, Department of Oral and Maxillofacial Surgery, GSL Dental College And Hospital Rajamahendravaram – 533296 Andhra Pradesh India.

[3]Dr. Srikanth Damera, Professor, Department of Oral and Maxillo-Facial Surgery GSL Dental College and Hospital Rajamahendravaram – 533296 Andhra Pradesh India.

[4]Dr. Govind Raj Kumar, HOD, Department of Oral and Maxillo-Facial Pathology GSL Dental College and Hospital Rajamahendravaram – 533296 Andhra Pradesh India.

[5]Dr P.S.S Meghana Sri Ravali, Post Graduate, Department of Oral and MaxilloFacial Surgery GSL Dental College and Hospital Rajamahendravaram – 533296 Andhra Pradesh, India.

Corresponding Author: Dr. Srikanth Damera, Professor, Department of Oral and Maxillo-Facial Surgery GSL Dental College and Hospital Rajamahendravaram – 533296 Andhra Pradesh India.

Citation of this Article: Dr. Ravipalli Raga Jyothsna, Dr. Siva Ganesh Pampana, Dr. Srikanth Damera, Dr. Govind Raj Kumar, Dr P.S.S Meghana Sri Ravali, “Cellular variant of pleomorphic adenoma of palate”, IJDSIR- April - 2022, Vol. – 5, Issue - 2, P. No. 272 – 276.

Copyright: © 2022, Dr. Srikanth Damera, et al. This is an open access journal and article distributed under the terms of the creative commons attribution noncommercial License. Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Pleomorphic adenoma is a benign neoplasm of salivary gland which primarily affects both major and minor salivary glands. The most common site of occurrence is parotid gland usually involving its superficial lobe. At times, it is also seen in minor salivary glands in which palate is the most common site. Pleomorphic adenomas can occur at any age group but mainly seen in 4th to 6th decades. These tumours are painless, well delineated and covered with normal mucous membrane. Rarely mucosal ulcerations are seen. This case report describes cellular pleomorphic adenoma of palatal minor salivary gland treated successfully by surgical excision.

Keywords: pleomorphic adenoma, palate, cellular

Introduction

Pleomorphic adenoma (PA) is a benign mixed tumor of salivary gland composed of epithelial and myoepithelial cells arranged in various morphological patterns, demarcated from the encompassing tissues by a fibrous capsule.

The incidence of salivary gland tumors arising from an intra-oral site is 13.9% to 51.4% of which 34.7% to

67.1% are benign.[1] Among intraoral salivary glands, PA affects the palate most typically (42.63%), followed by the lip (10%), buccal mucosa (5.5%), retromolar area (0.7%), and the floor of the mouth.[2] Here we present a case report of pleomorphic adenoma of minor salivary gland.

Case report

A 58-year-old male patient reported to the department of Oral and Maxillofacial surgery at GSL dental college and hospital with chief concern of swelling in the upper left jaw region since 3 years. History revealed that the swelling was detected 3 years ago and gradually increased in size. There was no history of colour change, discharge. Patient is known hypertensive and is on medication since 10 years. Extraoral examination did not reveal any facial asymmetry or palpable lymph nodes.

On intra oral examination, A solitary oval swelling of size approximately 3X2 cm is present on the left side of the palate extending antero-posteriorly 0.5cm behind the incisive papilla to 2.5cms away from junction of hard and soft palate. Mediolaterally 1cm away from the free palatal gingiva of right side to medially crossing the midline to 2mm away from the palatal marginal gingiva of left side. The swelling is firm in consistency and the surface of the swelling is smooth.

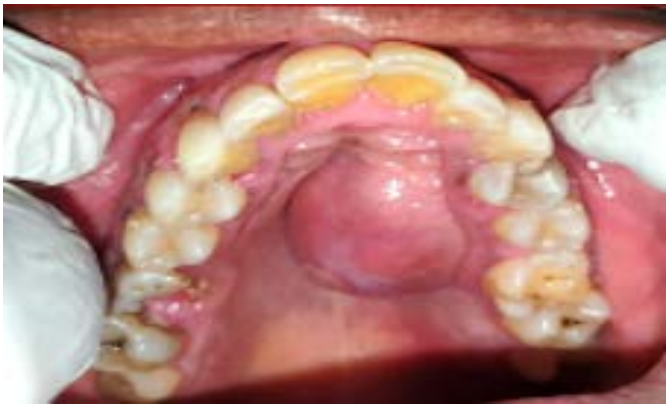

Figure 1: Intraoral photograph showing a solitary, diffuse and ovoid swelling in the right posterior hard palate

On orthopantomogram examination, it did not reveal any abnormal changes in the bone structures.

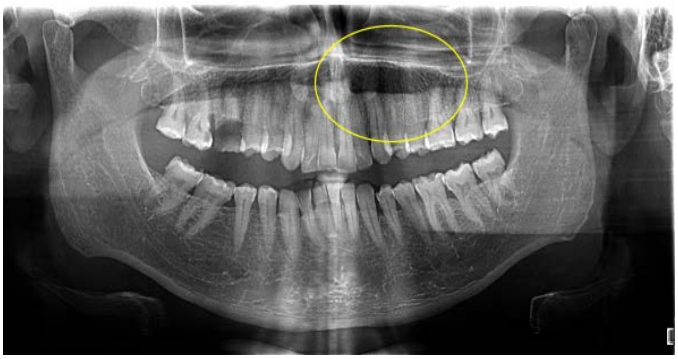

Figure 2: Orthopantamographs did not reveal any hard tissue involvement

On cone beamed computer tomography of maxilla shows a well-defined lesion extending from the palatal soft tissues of size 3X2.5 cm. There is no bony involvement.

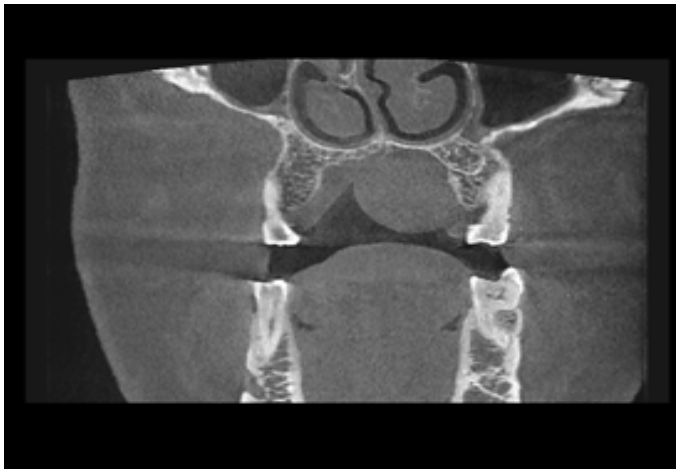

Figure 3: shows well defined lesion extending from palatal tissues of size 3X2.5cm

Fine needle aspiration cytology was done and on histopathological examination it was confirmed as benign salivary gland tumor of palate.

Surgical excision of tumor was planned under local anaesthesia. A crevicular incision was made from mesial papilla of 22 to the distal papilla of the region of 27 using a Surgical blade, the mucoperiosteal flap was reflected and the tumor mass was exposed and excised along with the mucoperiosteum.

© 2022 IJDSIR, All Rights Reserved

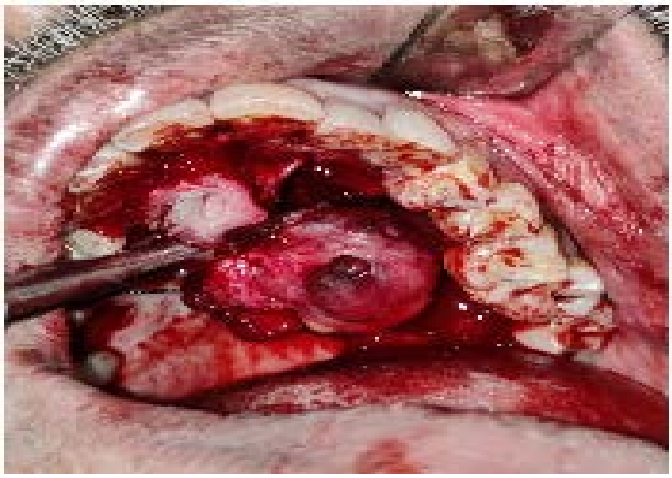

Figure 4: shows intra operative clinical photograph showing lesion being separated from the underlying bone.

The flap is sutured back, and raw area is protected by prefabricated splint. The entire specimen was sent for histopathological examination.

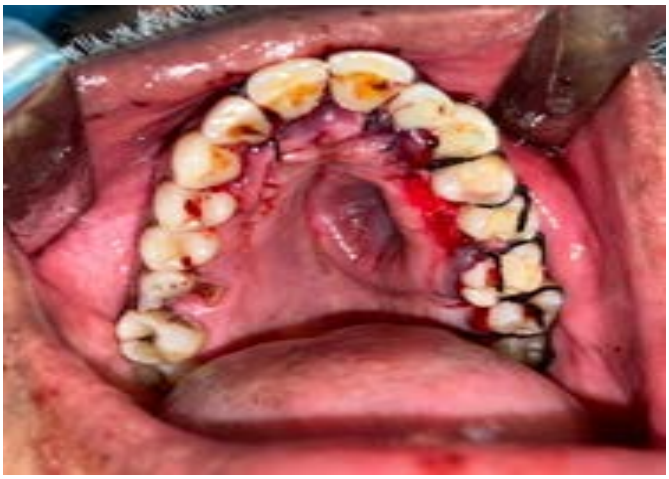

Figure 5: shows immediate post operative picture

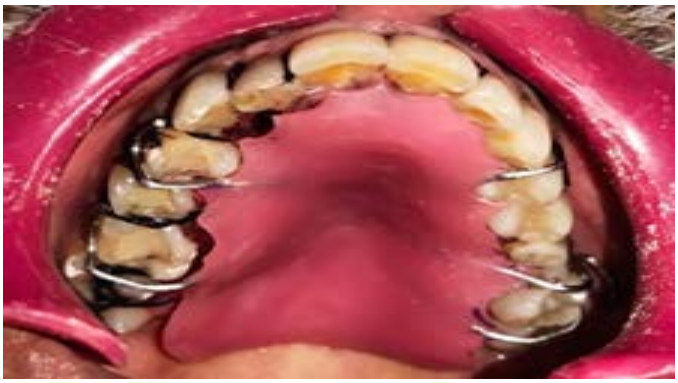

Figure 6: shows Raw area protected by prefabricated prosthetic splint

On microscopic examination, The H&E-stained soft tissues sections show connective tissue stroma exhibiting glandular epithelial cells. The stroma is well encapsulated and epithelial cells were showing proliferation with open phase nucleus and few hyperchromatic cells. The glandular epithelial cells were secreting pink eosinophilic material resembling that of osteoid. Few areas of the stroma showed myxomatous changes. Ductal areas with few dilated blood capillaries were also noticed.

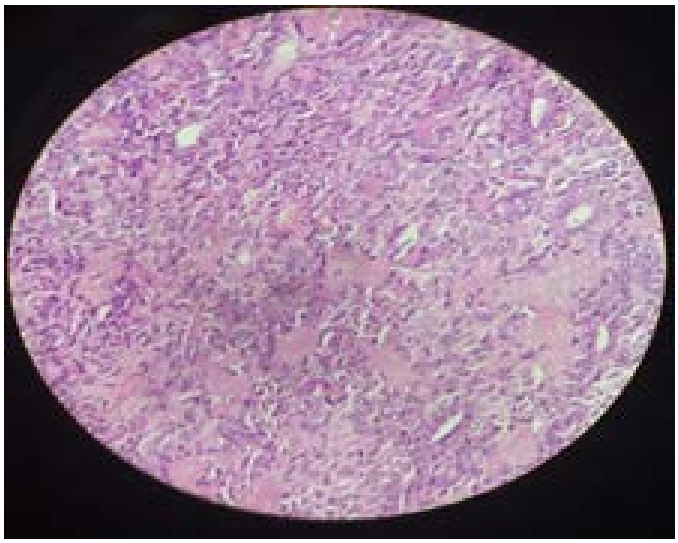

Figure 7: shows histopathological section showing predominantly of epithelial components and presence of myxomatous areas

The patient has been followed for two years with no signs of recurrence.

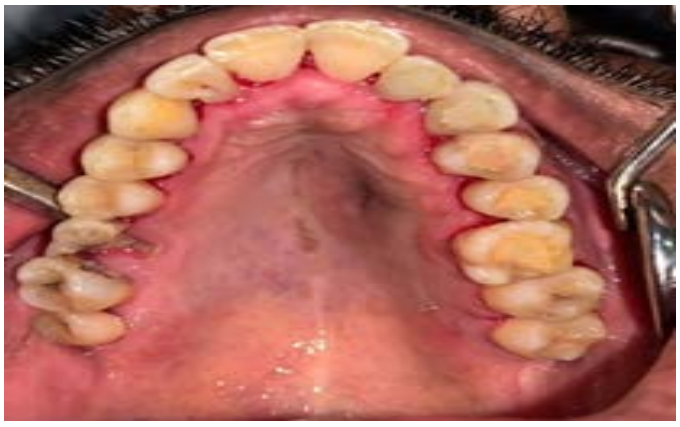

Figure 8: shows follow up for 2 years with no recurrence

© 2022 IJDSIR, All Rights Reserved

Discussion

Salivary gland tumors are generally the most complex due to their broad histological spectrum resulting from a different cellular arrangement, synthesis of extracellular matrix and differentiation of multiple tumour cells which is produced by certain tumour cells.[3] Pleomorphic adenoma is the most common neoplasm of major salivary gland as well as minor salivary gland.

In most of the cases, these tumors appear in the major salivary glands mainly parotid gland. When they appear in the minor salivary glands, Palate is the most common site and then followed by lips, buccal mucosa, tongue, tonsil, pharynx, retromolar area and nasal cavity. Research proves it as epithelial origin of the mixed tumour, as well as clonal chromosome abnormalities with aberrations involving 8q12 and 12q15.[4]

These Palatal tumors are mostly seen on the posterolateral aspect of the palate and clinically it appears as smooth, dome shape masses.[5] Intraoral pleomorphic adenoma can be slowly growing, painless firm swelling, mobile that does not cause ulceration of the overlying mucosa and it is firm submucosal mass when it originates in the hard and soft palate.

The main diagnostic modalities are histopathological analysis and imaging like CT or MRI. Radiographically, computerized tomography (CT) scan is ideal to know the extent of the lesion, bony invasion, and erosion whereas magnetic resonance imaging (MRI) would help delineate soft tissue spread. Incisional biopsy and Fine-needle aspiration cytology can aid in the diagnosis.[6]

The differential diagnosis for the above case includes palatal abscess, radicular cyst, adenoid cystic carcinoma, other salivary gland tumors, lipomas. Both odontogenic and non-odontogenic cysts can be ruled out since it did not demonstrate cystic contents. The smaller the salivary gland that is affected, the more likely it is to trigger a malignant tumor.[7] FNAC is a gold standard for diagnosis of salivary gland pathologies. It is also useful to differentiate non-neoplastic lesions from neoplasms and benign from malignant.[8]

Histopathologic ally, pleomorphic adenoma is composed of both epithelial and mesenchyme like components. Depending upon the proportions of mesenchymal like epithelial elements, they are further divided into cellular type, myxoid type and mixed type. Ideal cases of pleomorphic adenoma present as an even admixture of stromal and cellular elements. In rare cases, pleomorphic adenoma presents with a predominance of cellular stroma and a scanty stroma, but mostly palatal minor salivary glands have an incomplete encapsulation.[9] In this case, the swelling is firm in consistency and is well encapsulated.

Surgical excision of this tumor mass is the appropriate treatment plan with the removal of periosteum or bone if they are involved. An incomplete excision can lead to residual tumor cells, which results in recurrence because of its high rate of implantability.[10]

If the tumor is left untreated, it can lead to mechanical symptoms such as airway obstruction, dysphagia, dyspnea, and obstructive sleep apnea.[11]

Conclusion

Due to its diverse histological variants and increased risk of malignancy, the intra oral pleomorphic adenomas should be evaluated carefully. Wide surgical excision with negative margins is the prime strategy for the management of pleomorphic adenoma. Most recurrences can be due to inadequate surgical techniques. Definitive diagnosis lies on histopathological examination.

References

1. Mendenhall WM, Mendenhall CM, Werning JW, Malyapa RS, Mendenhall NP. Salivary gland

© 2022 IJDSIR, All Rights Reserved

pleomorphic adenoma. Am J Clin Oncol. 2008 Feb;31(1):95-9

2. Arumugam P, Christopher P J Kumar S, et al. (March 25, 2019) pleomorphic Adenoma of the palate: A Case report. Cureus 11(3): e4308. DOI 10.7759/CUREUS.4308

3. Kulkarni AV, Kini R, Rao PK, Desai DK, Bhandarkar GP, Kashyap RR, et al. An unusual presentation of mixed tumor of salivary gland. Arch Med Health Sci 2017; 5:77-8.

4. Taiwo AO, Akinshipo A, Braimah RO, Ibikunle AA. Pleomorphic adenoma of the upper lip: A case report. Saudi J Med Med Sci 2018; 6:32-5

5. International Journal of Scientific and Research Publications, Volume 3, Issue 1, January 2013 1 ISSN 2250-3153 Pleomorphic Adenoma of Hard Palate: A Case Report Dr. S. P. Lenka, Dr. Sub rat Kumar Padhiary, Dr. Santosh Kumar Subudhi , Dr. Harsh Mohan Pathak , Dr. Sujit Sahoo

6. Rahnama M, Orzędała-Koszel U, Czupkałło L, Lobacz M. Pleomorphic adenoma of the palate: a case report and review of the literature. Contemp Oncol (Pozn). 2013;17(1):103-6. doi: 10.5114/wo.2013.33438. Epub 2013 Mar 15. PMID: 23788973; PMCID: PMC3685345

7. Pleomorphic adenoma of the hard palate Naseer Mohammad, Pavan Kumar B, Brahmaji Rao J, Yashwanth Yadav

8. Solanki MC, Gandhi S, Koshy G, Singh I. Pleomorphic adenoma of palate. Chris med J Health Res 2014; 1:277-80

9. Radhika T, Maheshwari SU, Kumar KS, Jeddy N. Rare histologic presentation of pleomorphic adenoma: A diagnostic dilemma. J Oral Maxillofacial Pathology. 2020 Sep-Dec;24(3):563-567

10. Chavan SN, Rathod JK. Lesion on palate: A diagnostic dilemma. J Indian Acad Oral Med Radiology 2016; 28:223-6.

11. Kaminski M, Janicki K. A case of giant pleomorphic adenoma of the cheek with two malignant centers. Otolaryngology Pol 2002; 56:385-7

© 2022 IJDSIR, All Rights Reserved