The Journal of Dental Panacea 2023;5(4):189–192

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The Journal of Dental Panacea

Journal homepage: https://www.jdentalpanacea.org/

Case Report

Pleomorphic adenoma of hard palate- Two case reports

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ARTICLE INFO

Article history:
Received 08-09-2023
Accepted 19-10-2023
Available online 12-12-2023

Keywords:
Pleomorphic adenoma
Salivary gland neoplasm
Non-Odontogenic origin
Homogenous radiolucency
Squamous epithelium

ABSTRACT

Pleomorphic adenomas (PA), which account for 40–70% of all occurrences of salivary gland tumours, are the most common kind of big and small salivary gland tumours. The most frequent intraoral PA sites are the lips, buccal mucosa, and palate. A slow-growing, painless swelling on the posterior lateral region is the clinical sign of palatal PA. This article's goal is to give readers some important details about its clinical characteristics, radiological characteristics, and treatment regimens.

1. Introduction

Pleomorphic adenoma (PA) is a benign mixed tumour composed of epithelial and myoepithelial cells arranged in various morphological patterns and isolated from neighbouring tissues by a fibrous capsule.[1] The mixed benign tumour, or PA, which involves both the main and minor salivary glands, accounts for 40–70% of all salivary gland tumours. The parotid gland is the main group's most usually afflicted gland, whereas the minor group's most frequently impacted area is the palate. Other intraoral sites for this tumour include the tongue, tonsil, throat, floor of the mouth, lip, buccal mucosa, and retromolar area.[1,2]

2. Case Report

2.1. Case 1

A 47-year-old female patient reported to the department of oral medicine and radiology department, Teerthanker Mahaveer dental College & Research Centre, Uttar Pradesh, India. The patient's main complaint was swelling near her upper left back tooth. The swelling was painless when it first appeared and steadily expanded to its current size over the course of six months, according to the disease's history. There were no additional symptoms (such as numbness, dysphagia, stridor, speech, or masticatory issues) brought on by the lesions. There was no prior history of injury, fever, or an identical swelling elsewhere in the body. The patient had no systemic disorders or harmful behaviours, according to his or her medical history, and was in good condition. Oral prophylaxis was performed two years before the patient's presentation, according to dental history.

The patient appeared healthy overall, had a normal walk, and was of average build and consciousness. Her vital indicators were within the expected ranges. The extraoral examination revealed no lymphadenopathy or facial asymmetry.

During an intraoral examination, we discovered a solitary, 3 cm by 3 cm dome-shaped enlargement near the lateral edge of the hard palatal surface on the left. From the area of 25 to the region of 27, the swelling expanded anteriorly and posteriorly (Figure 1).

According to her assertions, ulcerative alterations in the underlying mucosa were caused by the ingestion of hard

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https://doi.org/10.18231/j.jdp.2023.040

foods. The swelling was unilocular, mildly painful, non pulsatile, solid, immovable, and had well-defined edges. Stretch marks might be seen on the mucosa covering the lesion. No abnormalities of the teeth connected to the disease were discovered during an intraoral hard tissue examination.

Pleomorphic adenoma was reported as the provisional diagnosis following comprehensive clinical testing.

Basic blood testing on the subject revealed nothing abnormal. According to the fine niddle aspiration cytology (FNAC) data, the large fibrillary chondro-myxoid stroma was surrounded by clusters and scattered single plasmacytoid epithelial cells with round regular nuclei and a little amount of cytoplasm. These cells implanted there might also reveal stroma suggestive of a pleomorphic adenoma.

Year of postoperative consultation followed the surgical excision, which was performed under local anesthesia.

2.2. Case 2

A 35-year-old male patient reported to the department of oral medicine and radiology department, Teerthanker Mahaveer dental College & Research Centre, Uttar Pradesh, India. The patient's primary complaint was that his palate was swollen. The illness's history indicated that the swelling started off painless and progressively expanded to its current size over the course of a year. The lesions did not cause any further symptoms, such as numbness, dysphagia, stridor, speech problems, or masticatory issues. There was no prior history of injury, fever, or any other kind of swelling in that area of the body. The patient's past medical history indicated that they were well and free of systemic ailments, however they occasionally had a propensity of chewing guthkah. No prior dental history existed. The patient appeared healthy overall, had a normal walk, and was of average build and consciousness. His vital indicators were within the expected ranges. There were no signs of facial asymmetry, lymphadenopathy, or other issues during extraoral inspection.

During an intraoral examination, we discovered a single, dome-shaped enlargement that was 5 cm by 5 cm and resembled a hard palatal triangle form. The swelling covered the distal portion of teeth 16 and 26 anteriorly and 3 cm below the incisive foramen posteriorly (Figure 2). Numerous blood vessels could be seen in the overlaying mucosa. The swelling was palpable and had well-defined boundaries. It was unilocular, mildly painful, nonpulsatile, hard, and immovable. Over the lesion, the mucosa was elongated. No abnormalities of the teeth connected to the lesion were found during an intraoral hard tissue examination.

After all clinical investigation the provisional diagnosis was given as pleomorphic adenoma.

A maxillary cross sectional radiograph was recommended for the initial radiological assessment, and it showed a homogenous radiolucency with several corticated boundaries in the mid-palatal area, albeit the posterior extension was not fully understood (Figure 3). Following that, we suggested contrast-enhanced computed tomography. It showed a well-defined, midline, homogeneous, expansile lytic lesion measuring approximately 34*32*28mm (CCxAPxTR), showing attenuation values slightly less than adjacent soft tissue, not showing any significant enhancement is seen epicentered on the hard palate and projecting inferiorly and superiorly into the oral cavity. A thin, interrupted sclerotic rim of the lesion is also seen. There are little peripheral lobulations.The bony nasal septum's inferior side is rarefied. The tongue's dorsum and bilateral inferior turbinates exhibit a mass effect. The bony nasal septum is slightly deviated to the right (Figure 4).

The results of the patient's regular blood tests were normal.A well-encapsulated mass of sheets and islands of myoepithelial cells as well as a very small number of duct-like spaces filled with eosinophilic material were found in the underlying connective tissue of the mass after histopathological analysis of the mass revealed parakeratinized stratified squamous epithelium. Additionally observed were plasmacytoid and spindled epithelial cells (Figure 5).

We diagnosed this as a pleomorphic adenoma after correlating all clinical, radiological, and histological reports. The lesion was surgically removed, and further appointments were scheduled for another year to check for any recurrence or secondary infections. However, six months following the treatment, the lesion had fully healed.

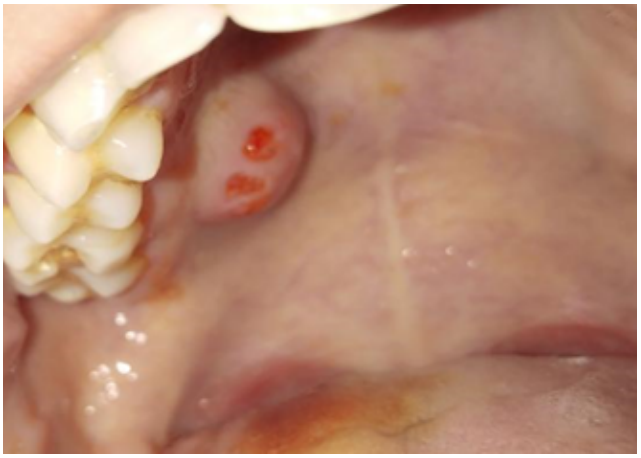

Figure 1: A dome shaped swelling present in the left lateral side of the hard palate.

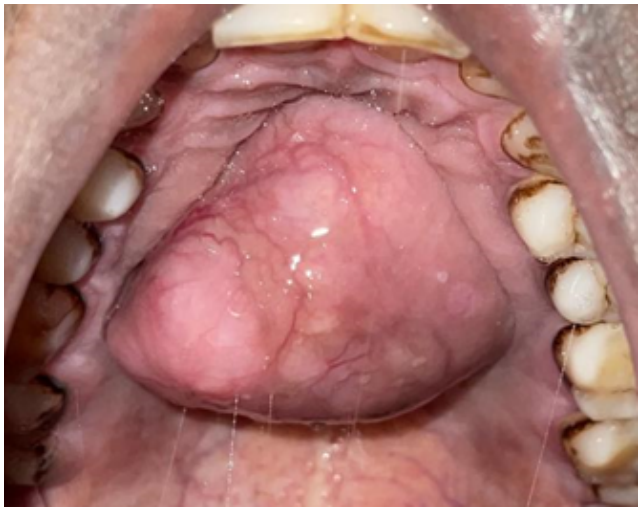

Figure 2: A large triangular dome shaped swelling present all over the hard palate.

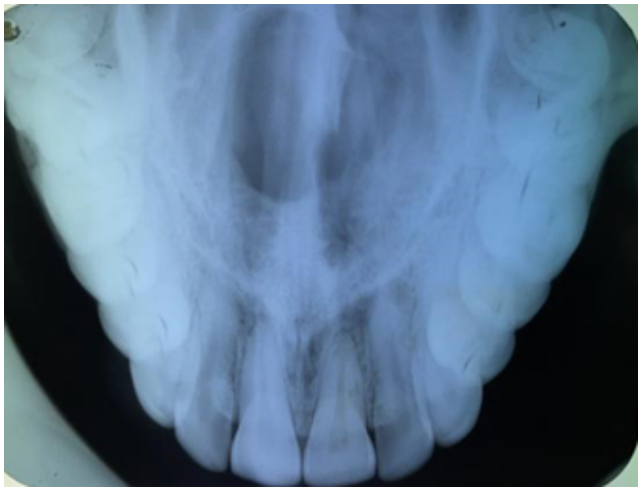

Figure 3: A homogeneous radiolucency present in the hard palate with multiple well defined border.

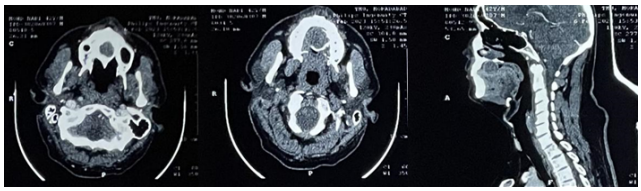

Figure 4: A homogeneous radiolucency with multiple corticated borders in mid palatal area.

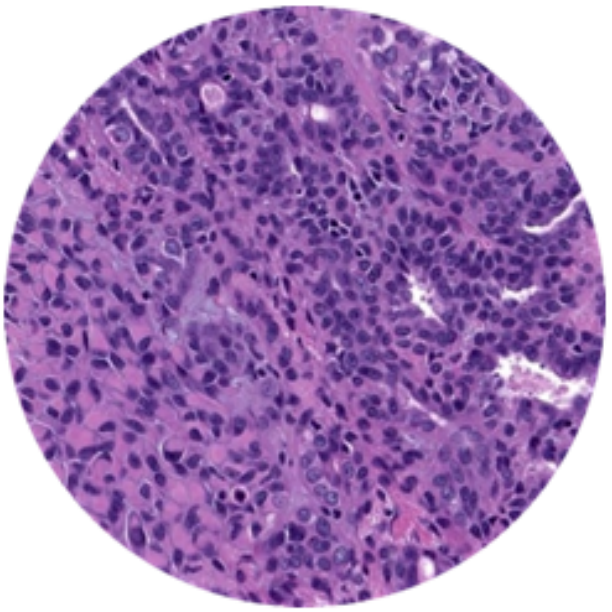

Figure 5: Plasmacytoid myoepithelial cells

3. Discussion

According to Vuppalapati, PA takes its name from the architectural pleomorphism that may be observed under light microscopy. The tumour is defined by the phrase "mixed tumor-salivary gland type," which alludes to the pleomorphic appearance of PA rather than its dual origin from epithelium and myoepithelial sections. The "mixed tumour" trait is present in 73% of all salivary gland tumours. PA is most common on the palate, which corresponds to small glands.[3,4]

Spiro et al. found that 20% to 40% of all salivary gland cancers come from tiny salivary glands in a study involving 2078 people with salivary gland neoplasia. The age range of patients with mixed small salivary tumours is frequently between the fourth and sixth decades. There is a slight gender bias for women who have the ailment, despite the fact that it can afflict either gender.[5,6] PA appears as a smooth, dome-shaped mass in the oral cavity that is slow-growing, firm, and commonly visible on the posterior lateral region of the palate. It is painless. The hard palate mucosa is securely fused, giving the impression that it is permanent. PA tumours in the buccal and lip mucosa are easily mobile. PA of the palate is rarely allowed to grow larger than 1 cm to 2 cm in diameter since it makes it difficult to masticate, enunciate, and swallow.

PA is recognized and treated earlier than primary salivary gland tumours. If the overlying mucosa is ulcerated and the ulcers is not the consequence of trauma or a biopsy, malignancy should be taken into account.[6–8]

Histology reveals that the tumour is composed of mesenchymal, myoepithelial, and epithelium with intricate

structures.[3] An eosinophilic coagulum fills a glandular, ductal structure consisting of sheets and nests of epithelial cells. Squamous metaplasia and keratin pearls can also be detected.

Myoepithelial cells are a distinguishing feature of PA. Small tumours of the salivary gland are the only locations where myoepithelial cells of the plasmacytoid type may be identified. Spindle cells, translucent cells, and oxyphilic cells can also exist. The mesenchymal component is responsible for the formation of the chondroid, myxoid, and osseous areas. Fibrosis in the parenchyma of the salivary gland results in the formation of a false capsule.[2,9,10]

The following disorders should be ruled out, according to a case of PA of the palate documented by Daryani et al.: hematoma (bluish discoloration), mucocele, necrotizing sialometaplasia, mucoepidermoid cancer, adenoid cystic carcinoma, and polymorphous low-grade adenocarcinoma.[5,11] Similar enlargements were described by Sharma et al. with probable diagnosis including neuroma, palatal abscess, and neurofibroma.[12]

Surgery is the primary method of treatment for PA. Because these cancers are radioresistant, radiation treatment shouldn't be employed. Even though these benign tumours are well-encapsulated, resection of the tumour with an adequate margin of grossly normal surrounding tissue is necessary to prevent local recurrence because it is known that these benign tumours have microscopic pseudopod-like extensions into the surrounding tissue as a result of "dehiscence" in the capsule.[3,7,13] The multicentric nature of PA, implantation from capsule rupture, and islands of cancer tissue left behind after surgery are all considered to have a role in its recurrence. As a result, continuous observation is required.[1,7,13]

4. Conclusion

Adult patients are the age group most frequently affected by PA of the palate. The most prevalent symptom is a slow-growing, painless submucosal swelling on the hard palate. The final diagnosis is determined by histopathological examination, and surgical excision with wide margins is the suggested treatment. Fantastic outcomes may be attained if the wound is allowed to granulate and heal spontaneously. Recurrences are uncommon, but they can be found with persistent monitoring.

5. Conflict of interest

There is no conflict of interest.

6. Source of Funding

None.

References

1. Chau MN, Radden BG. A clinical-pathological study of 53 intraoral pleomorphic adenoma. *Int J Oral Maxillofac Surg*. 1989;18(3):158–62.
2. Toida M, Shimokawa K, Makita H, Kato K, Kobayashi A, Kusunoki Y, et al. Intraoral minor salivary gland tumors: A clinicopathological study of 82 cases. *Int J Oral Maxillofac Surg*. 2005;34(5):528–32.
3. Lotufo MA, Júnior CA, Mattos JP, França CM. Pleomorphic adenoma of the upper lip in a child. *J Oral Sci*. 2008;50(2):225–8.
4. Yin WY, Kratochvil FJ, Stewart JC. Intraoral minor salivary gland neoplasm: Review of 213 cases. *J Oral Maxillofac Surg*. 2005;63(6):805–10.
5. Daniels JSM, Ali I, Bakri IMA, Sumangala B. Pleomorphic adenoma of the palate in children and adolescents: A report of 2 cases and review of the literature. *J Oral Maxillofac Surg*. 2007;65(3):541–9.
6. Sharma Y, Maria A, Chhabria A. Pleomorphic adenoma of the palate. *Natl J Maxillofac Surg*. 2011;2(2):169–71.
7. Mendenhall WM, Mendenhall CM, Werning JW, Malyapa RS, Mendenhall NP. Salivary gland pleomorphic adenoma. *Am J Clin Oncol*. 2008;31(1):95–9.
8. Vuppalapati HB, Balasankula B, Kosuri PK, Banoth V. Pleomorphic adenoma of palate: a case report. *IJSS J Surg*. 2015;1:22–5.
9. Spiro RH. Salivary neoplasms: overview of a 35-year experience with 2,807 patients. *Head Neck Surg*. 1986;8(3):177–84.
10. Daryani D, Gopakumar R, Ajila V. Pleomorphic adenoma of the soft palate: myoepithelial cell predominant. *Indian J Dent Res*. 2011;22(6):853–6.
11. Rawson K, Kallalli BN, Gokul K, Singh A. Pleomorphic adenoma of the palate: a case report and review of a rare entity. *J Indian Acad Oral Med Radiol*. 2016;28(3):329–33.
12. Appadurai R, Lingeshwar D, Sumathy MP, Sswedheni SU, Jeyaruby J. Pleomorphic adenoma of hard palate: A case report. *UJSS*. 2018;4:4.
13. Sachdeva SK, Verma P, Sunderraj S, Vengal M. Pleomorphic adenoma of the palate in an edentate male patient: an unusual clinical presentation. *Clin Cancer Investig J*. 2015;4(2):240–2.

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Cite this article: Manna A, Khan T. Pleomorphic adenoma of hard palate- Two case reports. *J Dent Panacea* 2023;5(4):189-192.