

Pleomorphic Adenoma of Hard Palate: A Case Report

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I. INTRODUCTION

The pleomorphic adenoma otherwise called as benign mixed tumor, is the most common salivary neoplasm.¹ It accounts for 53% to 77% of parotid tumors, 44% to 68% of submandibular tumours and 33% to 43% of minor gland tumors.² Pleomorphic adenomas are derived from a mixture of ductal and myoepithelial elements.^{2,3} The terms pleomorphic adenoma and mixed tumor both represent attempts to describe the tumor's unusual histopathologic features, neither term is entirely accurate.⁴ The tumor often has a prominent mesenchyme appearing stromal component; it is not truly a mixed neoplasm that is derived from more than one germ layer.^{1,4}

This paper describes a case of pleomorphic adenoma of minor salivary gland in palate of a middle aged male patient who was treated with wide surgical excision showing no evidence of recurrence 2 years post operative follow up.

II. CASE REPORT

A 35 year male patient reported to the department of oral and maxillofacial surgery with a slow growing right hard palate mass that had been present for the past one year. The non tender mass was exerting pressure on the patient's tongue and this prompted him to seek medical attention. On general examination, all the vital signs were within the normal range with no history of diabetes or hypertension.

On examining intraorally, a diffuse roughly oval in shape swelling was present in relation to the left side of the hard palate measuring roughly about 3 x 2 cm. Anteroposteriorly, the swelling extended from the distal aspect of left first premolar to the left side maxillary tuberosity area. Mediolaterally, it extended from mid palatal area to the lingual surface of maxillary molar teeth. On palpation of the lesion intraorally, the swelling was non tender, firm in consistency, did not show any fluctuations. Hard tissue examination revealed mobility of teeth. CT showed a well circumscribed right hard palatal mass. Under general anaesthesia, an incision was given and dissection done and the whole tumor mass was excised along with mucoperiosteum. The entire mass was sent for histopathology study. In the meantime the patient was under antibiotic coverage and NSAIDs.

Grossly, the lesion was in the form of an ovoid well demarcated, partially encapsulated, gray-white partly myxoid, partly rubbery mass, measuring 2.5 x 1.7 x 1.5 cm, with solid cut surface (Figure 3). On histology, a well-circumscribed growth was seen. The neoplastic proliferation had biphasic populations of epithelial and mesenchymal cells. The former was composed of glandular structures lined by round, oval cells having large

hyperchromatic nuclei, pink cytoplasm and myoepithelial basal cell layer. The stroma was myxoid, hyaline and chondroid. No mitotic figures or necrosis were seen (Figure 4 & 5). Postoperative period was uneventful. The patient was followed up over a period of for 2 years and no recurrences were observed. The final histopathology report confirmed the diagnosis as benign pleomorphic adenoma of minor salivary gland of hard palate.

III. DISCUSSION

Pleomorphic adenoma appears as a painless slowly growing firm mass. The tumor can occur at any age but it is most common in young and middle aged adults between the ages of 30 – 60. It is the most common salivary gland tumor, with a slight female predilection.^{1,2,3} The tumor is movable in the initial stages but later as it grows in size, it becomes less mobile. The palate is the most common site for minor gland mixed tumor.^{5,6} Palatal tumors almost are always found on the posterolateral aspect of the palate, presenting as smooth surface, dome shaped masses.⁷ The pleomorphic adenoma is typically a well circumscribed, encapsulated tumor. The capsule may be incomplete or show infiltration by tumor cells. This lack of complete encapsulation is more common for minor gland tumor.^{5,7}

The tumor is composed of mixture of glandular epithelium and myoepithelial cells within a mesenchyme like background. The epithelium often forms ductal and cystic structures or may occur as islands or sheets of cells.⁸ Keratinising squamous cells and mucous producing cells can also be seen. Myoepithelial cells sometimes appear as angular or spindle and some are rounded and demonstrate eccentric nucleus and eosinophilic hyalinised, thus resembling plasma cells.⁹ The highly characteristic 'stomal' changes are believed to be produced by myoepithelial cells. In many tumors, the stroma exhibits area of an eosinophilic, hyalinised changes. Occasionally, salivary gland tumors are seen that are composed almost entirely of myoepithelial cells with no ductal elements. Such tumors are often called as myoepitheliomas.^{8,9,10}

Treatment of choice is surgical excision. For the ones present in superficial lobe of parotid gland, superficial parotidectomy is done with preservation of facial nerve.¹¹ Local enucleation of lesion is avoided for lesions in the deep lobe, total parotidectomy is done and if possible with preservation of facial nerve. The tumors of the hard palate usually are excised down to periosteum, including the overlying mucosa.^{12,13}

The prognosis is excellent, with a cure rate of more than 95%. The risk of recurrence is low for tumors of minor glands.¹⁴ Tumors with a predominantly myxoid appearance are more

susceptible to recur than those with other features. Malignant degeneration is a potential complication, resulting in carcinoma ex pleomorphic adenoma. The risk of malignant transformation is only 5% of all cases.^{15,16}

To conclude, pleomorphic adenoma of minor salivary gland is relatively rare and therefore its diagnosis requires a high index of suspicion. 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 necessary.



FIGURE 1: Palatal swelling extending from distal aspect of left first premolar to maxillary tuberosity area



FIGURE 3: Gross appearance of the excised specimen showing an encapsulated mass

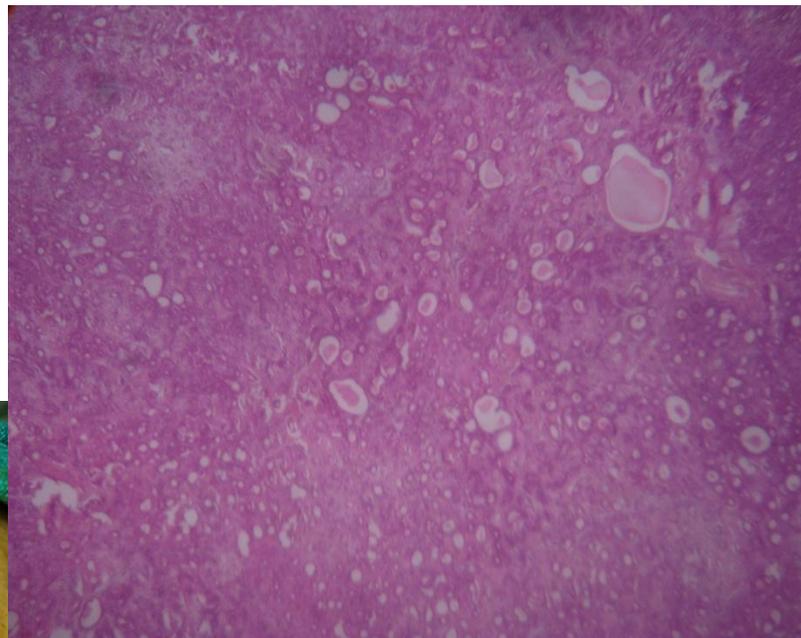


FIGURE 4: Pleomorphic adenoma with typical cellular and ductal areas, surrounded by hyaline and mixoid matrix (H&E, 10X)



FIGURE 2: Intra-operative view

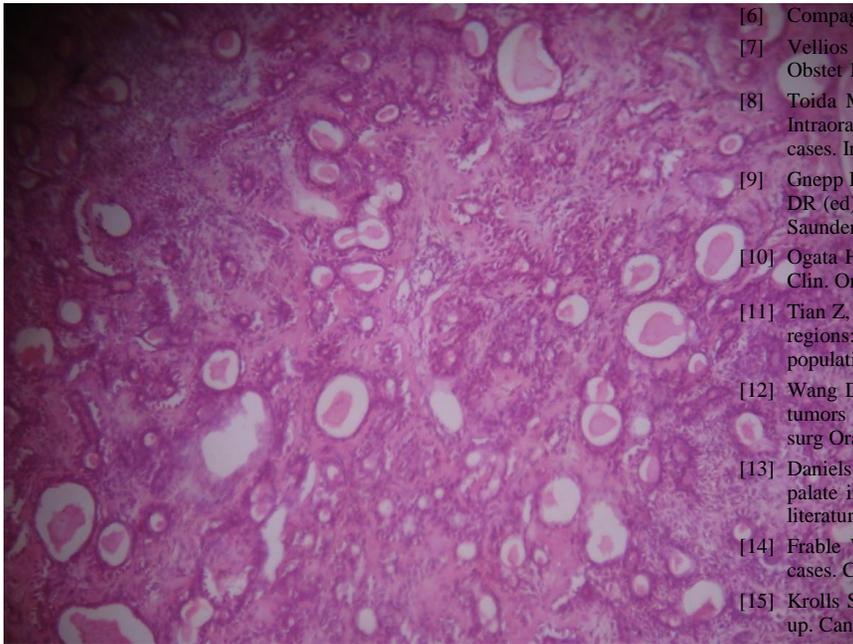


FIGURE 5: Histologic of the tumor showing the ductal epithelial and myoepithelial elements with chondromyxoid stroma (H&E, 20X)

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