Case Report

Plasmacytoid Myoepithelioma of the Palate: A Rare Case Report

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Abstract

Myoepithelioma is a rare benign salivary gland neoplasm accounting for less than 1% of all salivary gland tumors. The plasmacytoid variant shows a predilection for minor salivary glands, particularly the palate. We report a case of plasmacytoid myoepithelioma of the hard palate in a 25-year-old male, detected incidentally during dental evaluation. The diagnosis was established on histopathological examination and confirmed by immunohistochemistry demonstrating myoepithelial differentiation. Complete surgical excision was performed, and no recurrence was observed during 6- and 12-month follow-up. This case highlights the importance of considering myoepithelioma in the differential diagnosis of palatal masses and emphasizes the role of histopathology and immunohistochemistry in achieving an accurate diagnosis.

Keywords: myoepithelioma; plasmacytoid variant; palate; minor salivary gland; case report

Introduction

Myoepithelioma is a rare benign salivary gland neoplasm accounting for less than 1% of all salivary gland [1]. It is composed predominantly or exclusively of myoepithelial cells and lacks the ductal epithelial component that characterizes pleomorphic adenoma. Due to its rarity and histological overlap with other salivary gland tumors, particularly pleomorphic adenoma, accurate diagnosis requires careful correlation of clinical, radiological, and histopathological findings, often supported by immunohistochemistry [2, 3].

Myoepithelioma was first described as a distinct pathological entity by Sheldon in 1943 [4]. It was subsequently recognized as a separate neoplasm in the World Health Organization (WHO) classification of salivary gland tumors, with its classification further refined in the latest (WHO) Classification of Head and Neck Tumors, 5th edition (2024) [1, 5]. Based on cellular morphology, myoepitheliomas are classified into spindle, plasmacytoid, epithelioid, and clear cell variants. The plasmacytoid variant, characterized by plasma cell–like morphology, shows a marked predilection for minor salivary glands, particularly those of the palate [6].

Plasmacytoid myoepithelioma of the palate is uncommon, with only a limited number of cases reported in the literature [7]. Owing to its slow-growing and asymptomatic nature, it may remain unnoticed for long durations and is often detected

incidentally. We report a rare case of plasmacytoid myoepithelioma of the hard palate in a young adult male and discuss its clinicopathological features and management.

Case Report

A 25-year-old male presented to the dental outpatient department with pain in the lower left second premolar. During routine intraoral examination, an incidental swelling was noted over the hard palate measuring approximately 4 × 3 cm (Figure 1). The swelling appeared superficially vascular and was firm, non-tender, non-compressible, and non-reducible. The patient gave a history of a painless, slowly progressive palatal swelling that had been increasing in size over the past 2.5 years.

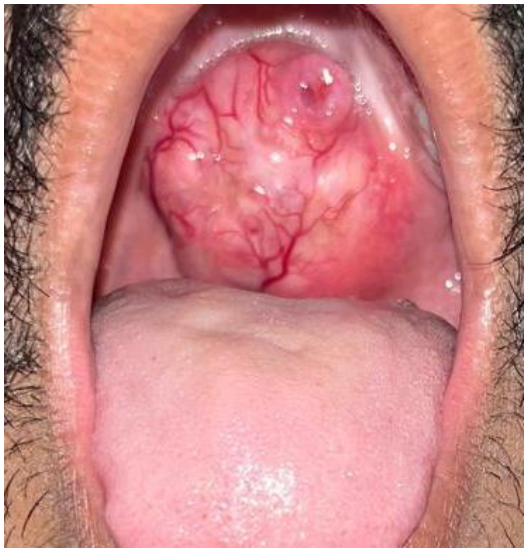

Figure 1: Clinical photograph showing a well-circumscribed, non-ulcerated palatal mass involving the hard palate.

The patient was referred to the otorhinolaryngology department for further evaluation. Contrast-enhanced CT scan of the maxillofacial region revealed a well-defined palatal mass without evidence of underlying bony erosion. Fine-needle aspiration cytology (May-Grünwald-Giemsa stain) suggested a salivary gland neoplasm (Figure 2). After obtaining informed consent, complete surgical excision of the lesion was performed under general anesthesia.

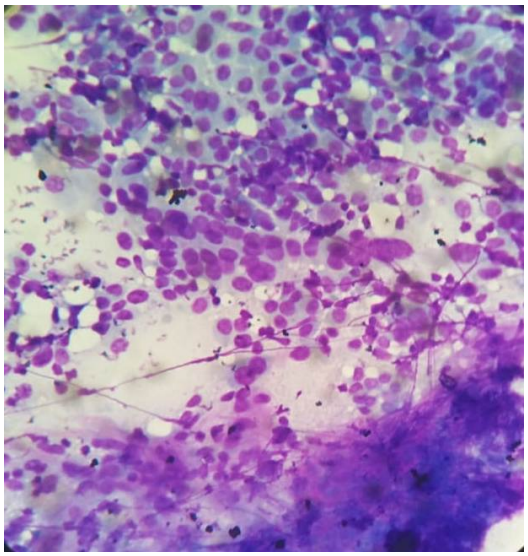

Figure 2: Fine-needle aspiration cytology (MGG ×400) showing plasmacytoid cells with abundant cytoplasm and eccentrically placed nuclei.

The excised specimen was submitted for histopathological examination. Microscopy revealed sheets and nests of round to oval cells with eccentric nuclei, fine chromatin, and abundant eosinophilic cytoplasm, consistent with plasmacytoid morphology (Figure 3A). Higher magnification highlighted well-defined tumor cells with abundant eosinophilic cytoplasm and eccentrically placed nuclei (Figure 3B). A diagnosis of myoepithelioma (plasmacytoid variant) was rendered, and immunohistochemistry was advised for confirmation.

Immunohistochemistry performed at an external laboratory demonstrated tumor cell positivity for *S-100* protein, *p63*, and smooth muscle actin (SMA), supporting myoepithelial differentiation, while epithelial membrane antigen (EMA) and CD138

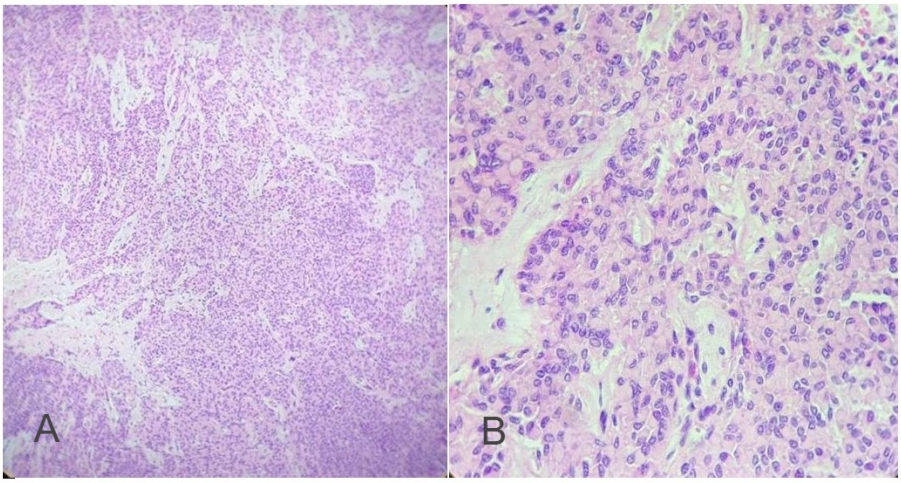

Figure 3: A. Photomicrograph demonstrating sheets of myoepithelial cells embedded in a myxoid stroma and surrounded by fibrous tissue (H&E ×100). B. On high power plasmacytoid tumor cells with well-defined borders, abundant eosinophilic cytoplasm, and eccentric nuclei with open chromatin were seen (H&E ×400).

(Syndecan-1) was negative.

The lesion was excised with grossly clear surgical margins.

The postoperative period was uneventful. The patient was followed up at 6 months and 12 months, during which no evidence of recurrence was observed.

Discussion

Myoepithelioma was earlier regarded as a variant of pleomorphic adenoma; however, it is now considered a distinct pathological entity characterized by exclusive or predominant myoepithelial differentiation and absence of well-formed ductal structures [4, 5]. The plasmacytoid variant most commonly involves the minor salivary glands of the oral cavity, particularly the palate, and usually presents as a slow-growing, painless mass [6].

Radiological findings in myoepithelioma are nonspecific and primarily help in defining the extent of the lesion. Fine-needle aspiration cytology may suggest a salivary gland neoplasm but often lacks specificity due to overlapping cytomorphological features. Therefore, histopathological examination remains the cornerstone for diagnosis.

Histologically, plasmacytoid myoepithelioma is characterized by sheets or nests of round to oval cells with eccentric nuclei and abundant eosinophilic cytoplasm set in a myxoid or hyalinized stroma. Immunohistochemistry plays a crucial role in confirming myoepithelial differentiation, with tumor cells typically expressing *S-100* protein, *p63*, calponin, and smooth muscle actin, thereby helping to distinguish it from pleomorphic adenoma and other salivary gland tumors [2, 3].

Differential diagnoses include pleomorphic adenoma, myoepithelial carcinoma, and extramedullary plasmacytoma. Pleomorphic adenoma shows ductal differentiation, which was absent in the present case. Myoepithelial carcinoma was excluded due to absence of cytological atypia, mitotic activity, necrosis, and infiltrative growth pattern. Extramedullary plasmacytoma was considered due to plasmacytoid morphology; however, lack of atypical plasma cells, negative IHC result and absence of clinical features of plasma cell dyscrasia helped exclude this entity.

Complete surgical excision with clear margins is the treatment of choice and is associated with an excellent prognosis [8, 9]. However, recurrence may occur following incomplete excision, warranting long-term follow-up. Indian literature has documented only a limited number of cases of plasmacytoid myoepithelioma involving minor salivary glands, underscoring the rarity of this lesion [10, 11].

In the present case, complete surgical excision was achieved, and no recurrence was noted during follow-up, consistent with previously reported outcomes.

Conclusion

Plasmacytoid myoepithelioma of the palate is a rare benign salivary gland tumor that may present as an asymptomatic palatal swelling. Accurate diagnosis relies on histopathological examination supported by immunohistochemistry. Complete surgical excision with regular follow-up ensures an excellent prognosis.

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Competing Interests: None declared.

Ethical Approval and Consent: Written informed consent was obtained from the patient. Ethical approval was not required for this case report as per institutional policy.

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