

# Fine needle aspiration cytology diagnosed Pleomorphic adenoma of Soft Palate- A rare case report

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## Abstract

Pleomorphic adenoma (PA) is benign tumor of salivary gland. Pleomorphic adenoma contains both epithelial and myoepithelial elements and it arises from myoepithelial cells of salivary gland. The index study to describe rare case of pleomorphic adenoma of soft palate diagnosed by FNAC (fine needle aspiration cytology).

**Keywords:** pleomorphic adenoma; soft palate; fnac; histology

**Short Title:** FNAC diagnosed Pleomorphic adenoma of Soft Palate.

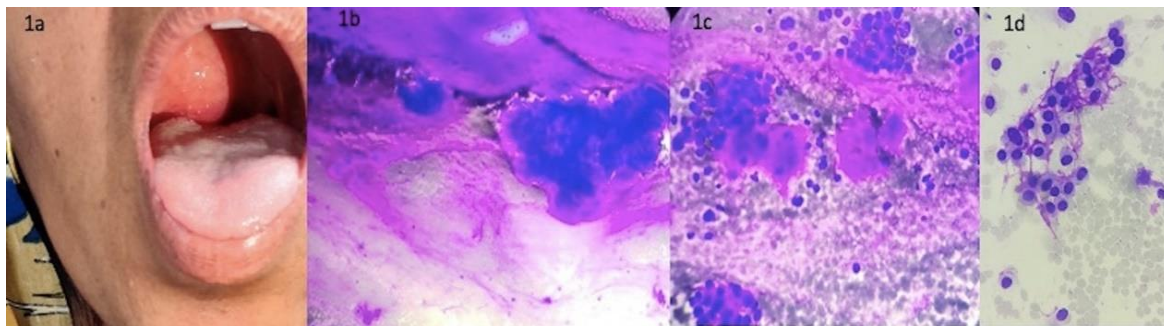
## Introduction

Pleomorphic adenoma (PA) is benign tumor of salivary gland. It is mostly arise from major and minor salivary gland, followed by lip and buccal mucosa. [1] Pleomorphic adenoma contains both epithelial and myoepithelial elements and it arises from myoepithelial cells of salivary gland.[2] Minor salivary gland tumors rare in comparison to major salivary gland, which comprising 15-20% salivary gland neoplasm.[3] Aim of index study to describe rare case of pleomorphic adenoma of soft palate diagnosed by FNAC (fine needle aspiration cytology).

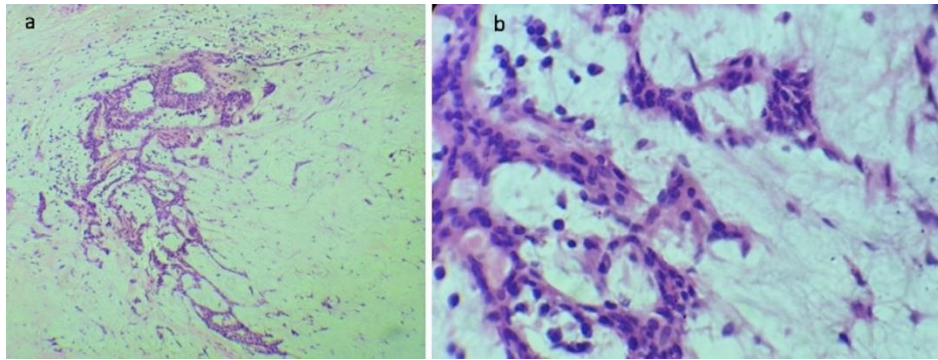
## Case Report/Case Presentation

A 46 years old female presented with history of difficulty in swallowing (progressive dysphagia) and voice change in OPD. The patient was referred to our FNAC clinic. Physical examination there was a mass on

right side of soft palate measuring 2.5 x 2.0 cm extending inferior-laterally (figure 1a). The overlying was mucosa normal. The CECT was suggested neurogenic tumor/schwannoma. The FNAC was performed from the 23-gauge needle, a 10-cm3 syringe and pistol handle. The blood mixed particulate material was aspirated. Both airdried and alcohol-fixed smears were made for Giemsa and haematoxylin and eosin stains. The smears were cellular and showed dual cell population, mainly myoepithelial cells singly and small groups, plasmacytoid cells, spindle shaped cell and few tightly cohesive clusters of benign ductal cells seen in a background of abundant fibrillary chondroid myxoid ground substance (figure 1b, c, d) and cytologically diagnosed pleomorphic adenoma (PA). The patient was underwent for surgery. Post-operative histological examination confirmed in a variety of architectural patterns of benign epithelial and myoepithelial neoplasm consist with pleomorphic adenoma (figure 2 a&b).



**Figure 1.** Photograph showing soft palate mass, (b,c,d) showing dual cell population, mainly myoepithelial cells singly & small groups, plasmacytoid cells, spindle shaped cell and few tightly cohesive clusters of benign ductal cells seen in a background of abundant fibrillary chondroid myxoid ground substance (Giemsa ,400x).



**Figure 2.** Photomicrograph showing myoepithelial and epithelial components arranged in a variable pattern in a chondroid myxoid stroma (a. H&E, 40x, b. H&E 400x).

### Discussion/Conclusion

FNAC is a very simple and reliable diagnostic technique for the diagnosis of both major and minor salivary gland tumors. In our case, the PA arises at the soft palate from the minor salivary glands. The efficacy of FNAC for the diagnosis of minor salivary glands is shown by few studies. [4] So, in our case, we also presented the efficacy and accuracy of FNAC in the diagnosis of minor salivary glands. PA more commonly occurs in males than females, with a ratio of 2:1. The reported case is female. The differential diagnoses are hematoma (bluish discoloration), mucocele, necrotizing sialometaplasia, mucoepidermoid carcinoma, adenoid cystic carcinoma, and polymorphous low-grade adenocarcinoma. [5]

So, we concluded that FNAC is a very useful and accurate method for the diagnosis of rare tumors of the soft palate like PA. FNAC is also a minimum invasive and rapid diagnostic procedure.

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