Pleomorphic Adenoma of the Soft Palate

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Abstract

The majority of minor salivary gland tumors are malignant. Pleomorphic adenoma is a benign neoplasm which is commonly encountered in parotid and other major salivary glands. Occasionally, they may develop in minor salivary glands of the palate. We report a case of pleomorphic adenoma of minor salivary glands in the soft palate.

Introduction

Salivary gland tumors account for less than 3% of the head and neck tumors. Mixed tumor of the salivary gland, or pleomorphic adenoma, is a benign tumor arising mainly in the major salivary glands (65%), especially in the parotid and, less frequently, in accessory salivary glands (35%). A small minority (8%) are located in the oral cavity, neck and nasal cavity. The most common site for minor salivary gland pleomorphic adenoma is the palate, though it can also occur in the upper lip, cheek, floor of the mouth, larynx and trachea. Intraoral pleomorphic adenoma appears as a slowly growing, painless mass, usually in the fourth or fifth decade. It has its highest incidence between 30 to 60 years of age with female predominance. Fine-needle aspiration cytology (FNAC) and incisional biopsy can aid as diagnostic tools. Surgical resection is the treatment of choice. Pleomorphic adenoma generally does not recur after adequate surgical excision. The potential risk of malignant transformation of the pleomorphic adenoma is about 6%. The risk is increased by delay in diagnosis. We report a case of pleomorphic adenoma of the soft palate in an elderly lady, which was treated surgically.
Case Report: A female of 65 years presented with a slow-growing swelling on the soft palate. The swelling was noticed when she started having a foreign body sensation in the oral cavity. The swelling was painless and she did not complain of dysphagia or difficulty in breathing. On examination, there was a swelling measuring 4 cm by 3 cm on the soft palate to the left of midline. The mass was reaching up to the upper pole of the left tonsil. The lateral margin of the mass could not be demarcated. On palpation, the swelling was firm in consistency, with a small stony hard area, within. The mucosa overlying the swelling was intact, but was stretched and shiny compared to the other area (Figure 1 to the right). There were no enlarged cervical lymph nodes. A clinical diagnosis of minor salivary gland neoplasm was made. Fine needle aspiration cytology of the mass showed features suggestive of Pleomorphic adenoma. CT scan of the neck was done with contrast, which showed a well-defined, mildly-enhancing mass measuring about 4 cm by 3 cm on the right soft palate with areas of calcification. Laterally, the mass was impinging on the medial pterygoid muscle but without loss of plane. Inferiorly the lesion extended up to the upper pole of the tonsil resulting in the inferior displacement of the tonsil. The major vessels were normal. (Figures 2,3,4)

Excision of the mass was done under general anesthesia, with the patient in Rose’s position. The mass was excised with preservation of the overlying mucosa. Incision was closed in two layers with absorbable sutures (Figures 6,7,8).

Enlarged Pictures at End of Document
The mass was sent for histopathological examination, which confirmed the diagnosis of pleomorphic adenoma (Figure 9, 10). There was no evidence of malignancy.
The postoperative period was uneventful and the patient was allowed to take clear liquids after 4 hours, liquid and semisolids on the next day. She started taking regular food after 2 days and was discharged on the third day. She is under regular follow up and there is no evidence of recurrence or any other lesion in a 5 month follow-up period.

Discussion

Neoplasms of the minor salivary glands are rare and represent 9%-23% of glandular tumors. The majority (40%-50%) of them are malignant, with only 18% being benign. Pleomorphic adenoma is the commonest benign minor salivary gland tumor. It is commonly found in females than in males, with a male/female ratio varying from 1:1.4 to 1:1.76. The palate being the most common site, followed by lip, buccal mucosa, floor of mouth, tongue, tonsil, pharynx, retromolar area and nasal cavity. It presents as a painless slow-growing mass. Our patient was a 65-year-old female who presented with a slow-growing, painless swelling on the soft palate for one-year duration. Differential diagnoses for this case include: Odontogenic and nonodontogenic cysts, soft-tissue tumors, lymphomas and salivary gland tumors. The diagnosis of pleomorphic adenoma is established on the basis of history, physical examination, cytology and histopathology. CT scan and MRI can provide information of the location, size and extension of tumor to surrounding superficial and deep structures. Fine-needle aspiration cytology and incisional biopsy can aid in the diagnosis. The treatment of choice for pleomorphic adenoma in the minor salivary gland is wide local excision with the removal of periosteum or bone if they are involved. Our patient underwent excision of the mass in total with preservation of the overlying mucosa. Microscopically, the intraoral pleomorphic adenoma lacks a well-defined fibrous capsule. The tumor tissue is composed of epithelial and a mesenchymal component. The epithelial component consists of tumor cells arranged in ducts, cords and sheets. Ducts are lined by inner cuboidal and outer spindle-shaped myoepithelial cells. The mesenchymal area is present in the hypocellular area and is composed of stellate and spindle-shaped myoepithelial cells dispersed in a chondromyxoid matrix.

Immunohistochemical stains prove positive for various cytokeratins, S100 protein, glial fibrillary acid protein, vimentin, and smooth muscle actin. This describes the “mixed” nature of the tumor, both, stromal and epithelial lined.

Recurrences are not frequent. Simple enucleation of this tumor is believed to lead to a high local recurrence rate and should be avoided. Rupture of the capsule, or tumor spillage, is also believed to increase the risk of recurrence, so meticulous dissection is necessary. Rare cases of a metastatic nature and malignant transformation have been reported.

Conclusion

The majority of minor salivary gland tumors of the soft palate are malignant in nature. Nonulcerated, firm, dome shaped, nontender palatal masses of long duration should raise a high index of suspicion for pleomorphic adenoma. CT scan with contrast and Fine Needle Aspiration Cytology will aid in diagnosis. Complete extramucosal excision of the mass by a transoral route provides cure.
References


