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A RARE CASE OF LOW GRADE MUCOEPIDERMOID CARCINOMA OF A PALATINE TONSIL

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Abstract

BACKGROUND: *Mucoepidermoid carcinoma (MEC)is the most commonly found malignant tumor of the salivary glands, it occurs in both adults and children but predominantly in females. it mostly occurs in the parotid gland, followed by the palate and buccal mucosa, rarely it is found in locations such as the tongue, larynx or palatine tonsil.*

CASE PRESENTATION: *we report the case of a 27-year-old married female with no known comorbidities who presented to the ENT outpatient department with the complain of recurrent sore throat since year which was associated with dysphagia and odynophagia. Clinical examination of the oral cavity revealed right oropharyngeal exophytic growth which occupied the right side of the palatine tonsils, it did not reach up to the uvula and did not bleed on touch. On examination of the neck, the lymph modes in the neck were not palpable. A right sided tonsillectomy for the purpose of biopsy was done under general anesthesia, and histopathological analysis confirmed the diagnosis a low grade Mucoepidermoid carcinoma of tonsil.*

CONCLUSION: *Mucoepidermoid carcinoma of the tonsil is a very rare differential diagnosis, especially for a sore throat. Early imaging and clinical suspicion are essential for timely intervention.*

INTRODUCTION

Mucoepidermoid carcinoma (MEC) is the most frequently diagnosed malignant tumor of the salivary glands, occurring in both adults and children, with a slight predominance in females(1). It is most often found in the parotid gland, followed by the palate and buccal mucosa, but can occasionally develop in less common locations such as the tongue, larynx, or palatine tonsil. The tumor consists of a mix of mucous-producing, squamous, and intermediate cells, with low-grade forms showing greater differentiation, slower growth, and an overall better prognosis. This report describes an uncommon case of low-grade mucoepidermoid carcinoma originating within the tonsil, highlighting its rarity and clinical relevance

CASE PRESENTATION

A 27 years old female married with no known comorbidities presented to ENT outpatient department with complain of recurrent sore throat from 1 year which was associated with dysphagia and odynophagia. The symptoms were progressively increasing in intensity and not relieved by painkillers and antibiotics and were not associated with fever ,weight loss, nasal or aural symptoms. Family history and past medical history was unremarkable.

Examination of oral cavity revealed right oropharyngeal exophytic growth occupying right side of palatine tonsils not reaching up to uvula and not bleeding on touch. Overlying surface was smooth. On neck examination, lymph nodes of neck were not palpable.





CT scan with contrast showed right palatine tonsil was heterogeneously enhancing into to oropharynx and causing focal luminal narrowing(Figure 2). No other abnormalities found .

After taking informed consent and explaining purpose and procedure ,right sided tonsillectomy was performed under general anesthesia and specimen was sent for histopathological analysis (Figure 1) which revealed it to be Low Grade mucoepidermoid carcinoma of tonsil. Case was discussed in tumor board meeting and it was decided that no further surgery or chemo radiation needed.
Patient is still with us on followup and is doing well.

DISCUSSION

Mucoepidermoid carcinoma (MEC) is recognized as the most common malignant tumor of the salivary glands, representing approximately 10–15% of all salivary neoplasms and up to one-third of salivary gland malignancies. Although it can occur at any age, it shows a slight female predominance and most frequently presents in middle age. The parotid gland is the most common site, followed by minor salivary glands of the palate and buccal mucosa. Rare presentations have been documented in locations such as the tongue, palatine tonsil, larynx, Eustachian tube, breast tissue, thymus, and even the bronchi, reflecting the distribution of minor salivary and mucus-secreting glands throughout the aerodigestive tract.
Histologically, MEC is composed of varying proportions of mucous, squamous (epidermoid), and intermediate cells, often arranged in solid nests or cystic structures(2)Tumor grade is determined by features such as the proportion of mucous cells, cyst formation, cellular differentiation, growth pattern, cytologic atypia, and invasiveness. Low-grade tumors are generally well-differentiated, display abundant mucous and squamous components, and have a more favorable prognosis, whereas intermediate and high-grade tumors show greater atypia, aggressive behavior, and increased risk of recurrence or metastasis. Nonetheless, even low-grade MECs have been reported to metastasize, underlining the importance of careful long-term follow-up.
The clinical presentation of MEC is variable and influenced by the size of the tumor and its location.(3) Most cases present as a painless, slow-growing swelling, which can be soft or rubbery in consistency. Ulceration, pain, and pressure symptoms occur less frequently but are more common in advanced disease. Intraoral lesions often present as submucosal nodules on the palate or buccal mucosa, but in some rare cases, lesions may arise from less common sites such as the palatine tonsil, where the presence of minor salivary tissue is limited. The occurrence of MEC within the palatine tonsil is exceptionally rare, with very few cases documented.
Prognosis in MEC correlates strongly with histological grade and stage at presentation. Low-grade tumors have excellent survival rates, with reported 5-year survival exceeding 90% and relatively low recurrence rates. In contrast, recurrence rates for intermediate- and high-grade tumors have been estimated at approximately 30% and 70%, respectively. The presence of positive surgical margins, perineural invasion, lymph node involvement, and extracapsular spread adversely affects prognosis, especially in high-grade disease.

The standard treatment for MEC is surgical excision with adequate margins.(4)Adjuvant radiotherapy is indicated in cases with high-grade histology, advanced local disease, perineural invasion, lymph node metastases, or close/positive margins after resection. Chemotherapy has limited benefit in improving overall survival and is generally reserved for palliation in advanced or metastatic cases. Newer targeted and systemic therapies are under investigation, but their role remains experimental.(5)
In this case, the rarity of MEC arising within the tonsil highlights the importance of histopathology, especially to establish a definitive diagnosis. In this case, a persistent sore throat that lasted for more than a year, and asymmetrically enlarged tonsils which lead to a tonsillectomy for biopsy. Complete surgical excision with histopathological confirmation remains the cornerstone of diagnosis and management.

CONCLUSION

This case highlights the importance of considering Mucoepidermoid carcinoma as a differential diagnosis for persistent sore throat. Early referral, imaging and histopathological analysis are necessary for effective and timely treatment.

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