Mucoepidermoid carcinoma of palate - a rare entity

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Abstract

Mucoepidermoid carcinomas (MEC) of minor salivary gland origin are rare in children and adolescents. A 17-year young male, reported with a painless swelling in the left posterior area of the hard palate since 6 months. Several clinical, radiographic, and histopathological investigations were carried out. Incisional biopsy confirmed the diagnosis of lesion as low grade MEC of the palate following which a wide surgical excision with adjacent free margins was carried out. This case report highlights the need for considering malignantly lesions in the differential diagnosis of palatal swellings even in younger age groups.

Introduction

Mucoepidermoid carcinoma (MEC) is an epithelial salivary gland neoplasm. MEC was first reported by Massao and Berger in 1942 as a distinct pathologic entity. About 5% of these occur in younger age group usually less than 18 years with female predominance.1,2 It is composed of mucus, squamous, and intermediate type of cells.3 Histologically, it is classified into low, intermediate, and high grade.3

About two-third of MEC arise within the parotid gland, and one-third develops within the minor salivary glands. When it develops in minor salivary glands, it can be located on the palate, retromolar area, floor of the mouth, buccal mucosa, lips, and tongue. It most frequently occurs in the fifth and sixth decades of life. Although uncommon, it is the main malignant salivary gland tumor in adolescent.3

Case Report

A young male of 17 years, reported to our department with the chief complaint of a swelling on the palate since 6 months. Swelling was initially small in size and has slowly increased in size. No b/o any toothache, pain, altered taste, sensation, numbness, pus discharge, bleeding from nose, trauma, extraction or weight loss. Medical history was non contributory.

Intraoral periapical radiograph revealed a well-defined radiolucency in the apical aspect of 26 Figure 2. Ultrasound revealed a solid mass lesion with few hypo echoic area within suggestion of necrosis possibility of a minor salivary gland tumor. Complete hemogram showed that all the parameters were within the normal range. FNAC was done aspiration was a 2 mL of pink colored viscous fluid mixed with blood to rule out hemangiom

Cytology report was low-grade mucoepidermoid carcinoma or mucous cyst (Figure 3).

Incisional biopsy was done, on histopathology examination, H and E staining showed three groups of cells, namely large mucous cells with an empty cytoplasm and peripherally placed nucleus, intermediate cells with basolaid nucleus, and epidermoid cells with eosinophilic cytoplasm suggestive of intermediate-grade MEC, following which a wide surgical excision with adjacent free margins was carried out. Postoperative healing was uneventful. Patient was followed up for an year and no recurrence reported.

Discussion and Conclusions

It has been estimated that about 1-5% of all salivary gland tumors develops in children and adolescents.3,4 The percentage of benign tumors occurring in the palate is higher than that of malignant tumors.3,5 Most of the malignant neoplasms of the salivary gland in children and adolescents occur in the parotid gland. Only a few cases are reported in minor salivary glands.

MEC is believed to arise from pluripotent reserve cells of excretory ducts that are capable of differentiating into squamous, columnar, and mucous cells.5,7 It occurs commonly in parotid glands and minor salivary gland is the second most common site. It accounts for <3% of all head to neck tumors with a female predilection.7,8 MECs are generally found between 10 and 16 years. Clinically, the majority of palatal MEC appears as firm, painless swellings, is mimetic mucocoeles or vascular lesions. When a compressible palatal mass is observed in an adolescent, reactive and neoplastic lesions should be included in the differential diagnosis. A fluctuant light blue mass in an intraoral salivary gland bearing area, MEC and mucocoele should also be considered.9,10

Histologically, mucoepidermoid carcinoma have been categorized into one of three histopathologically based on the amount of cyst formation, degree of cyto logic atypia, relative numbers of mucous, epidermoid and intermediate cells.

Low-grade tumors show prominent cyst formation, minimal cellular atypia and high proportion of mucous cells. High-grade tumors consist of solid islands of epidermoid and intermediate cells. They also demonstrate considerable pleomorphism and mitotic activity. Mucous producing cells infrequent, difficult to distinguish from squamous cell carcinoma.11,12

Intermediate grade fall between low and high grade. Cyst formation occurs but less prominent than low grade. All 3 major cell type will be present, but intermediate cells

[Clinics and Practice 2017; 7:1009]
predominate. Cellular atypia may or may not be present.

Moraes et al. suggested that low to intermediate-grade MECs originating from intraoral minor salivary glands can be managed by wide local surgical excision that ensures tumor-free surgical margins.9,11,12

If there is no evidence of bony involvement the tumor should be dissected down to the periosteum. If there is any evidence of periosteal involvement or bone erosion, removal of the involving bone is indicated. High-grade tumors require more aggressive surgical approach with postoperative radiotherapy and chemotherapy.

Low- to intermediate-grade MECs originating from intraoral minor salivary glands has a very low recurrence rate (<10%) and a high survival rate (90%).10 Low and intermediate grade MECs have an indolent clinical course and a rare chance for metastasis. Radical neck dissection is indicated if clinical evidence of metastasis. Prognosis depends on grade and stage of tumor.11,12

A close clinical follow-up should be for lifetime because low and intermediate-grade MEC in this age group can recur many years later.

References