International Journal of Otorhinolaryngology and Head and Neck Surgery
Kajai S et al. Int J Otorhinolaryngol Head Neck Surg. 2022 Nov;8(11):932-935
http://www.ijorl.com
pISSN 2454-5929 | eISSN 2454-5937

DOI: https://dx.doi.org/10.18203/issn.2454-5929.ijohns20222685

Case Report

Mucoepidermoid carcinoma of the palate: a rare case report

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Received: 23 July 2022
Revised: 05 September 2022
Accepted: 10 October 2022

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ABSTRACT

The salivary glands home of several tumoral pathologies, diversified by their locations and their histological types. Described as a rare malignant tumor of the accessory salivary glands, more so in the palatine bone; the diagnosis of Mucoepidermoid carcinoma (CME) remains difficult to evoke due to the uncommonness of the clinical signs and the insidious evolution. The purpose of this case report is to discuss the clinical manifestation, diagnosis, treatment and the follow-up plan of this case. A 39-year-old patient, with no prior pathological history, presents with a painless swelling on the palate evolving for 4 years causing swallowing difficulties without any other signs, several clinical, radiographic and histopathological investigations were carried out for excision of the lesion. Biopsy of the lesion confirmed the diagnosis as mucoepidermoid carcinoma of the palate, following which wide surgical excision with adjacent free margins was performed, the additional surgical treatment consisted of bilateral functional lymph node dissection of groups I, II and III. The follow-up of the patient shows a good improvement in the local condition in the 18 months, after 36 radiotherapy sessions and without signs of recurrence. On the control CT scan with placement of an obturator palatal prosthesis to improve the quality of life awaiting a palatal flap. This case report highlights the need for diagnosis and of an appropriate treatment plan in cases of malignant tumors, as this can lead to morbidity and mortality.

Keywords: Mucoepidermoid carcinoma, Salivary gland, Hard palate

INTRODUCTION

The salivary glands home of several tumoral pathologies, diversified by their locations and their histological types. Described as a rare malignant tumor of the accessory salivary glands, more so in the palatine bone; the diagnosis of mucoepidermoid carcinoma (CME) remains difficult to evoke due to the uncommonness of the clinical signs and the insidious evolution, its etiopathogenesis is not well developed, but the treatment stand to be essentially surgical, associated or not with postoperative irradiation.[1] Its management requires several contributors, in particular surgeons, pathologists and oncologists. The aim of this article was to describe clinical, para-clinical, histological aspects of a rare case of CME of the palate, in a young patient, as well as the therapeutic approach in the light of the literature.

CASE REPORT

A 39-year-old patient, with no prior pathological history; such as exposure to tobacco and alcohol and no loss of healthy teeth, presents with a painless swelling on the palate evolving for 4 years, causing swallowing difficulties without any other associated signs odontological or rhinological ones.

The clinical examination revealed a slightly brownish painless mass in the posterior part of the right hard palate (Figure 1), lobulated, firm, well limited, non-beating,

without any endonasal expression nor any cervical lymph node.

CT scan with injection of PDC revealed a tissue mass, on the right part of the bony palate, with lobulated contours measuring 30×26 mm. The latest, which is spontaneously isodense with moderate and homogeneous enhancement, is indeed responsible of partial bone lysis of the bony palate and the lower part of the nasal septum.

The CT also revealed the presence of bilateral high jugulo-carotid adenopathies; the larger ones measuring: 30×20, 5 mm is in fact in the same side as the tumor.

A first biopsy was carried on with inconclusive results; corresponding to a chronic inflammatory tissue without signs of malignancy. Therefore a total excision of the tumor was performed; allowing an anatomopathological study, showcasing the presence of a squamous cell coating, largely dissociated by an infiltrating carcinomatous proliferation, made of cribriform masses and clusters.

Tumor cells are medium to large in size and the nuclei are anisokaryotic, increased in size with irregular contours sometimes hyperchromic with vesicular chromatin. To note that; the immunohistochemistry examination did showed an intense nuclear expression of the anti-Ki67 and anti-P63 antibodies.

The additional surgical treatment consisted of bilateral functional lymph node dissection of groups I, II and III, the pathological study of which revealed reactive lymphadenopathy, 25 on the right side versus 19 lymphadenopathy on the left and 1 lymphadenopathy under the chin.

The follow-up of the patient shows a good improvement in the local condition in the 18 months mark (Figure 4) after 36 radiotherapy sessions and without signs of recurrence on the control CT scan with placement of an obturator palatal prosthesis to improve the quality of life awaiting a palatal flap (Figure 5).

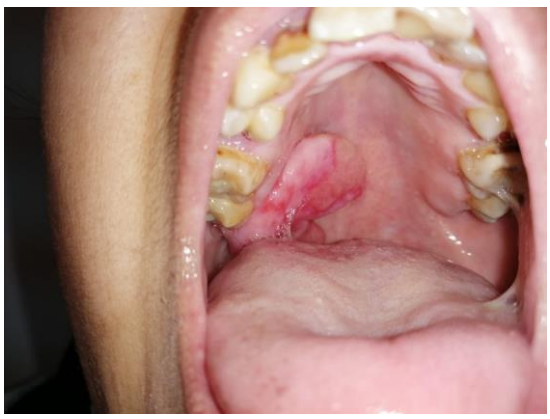

Figure 1: Clinical image of the mass in the posterior part of the right hard palate.

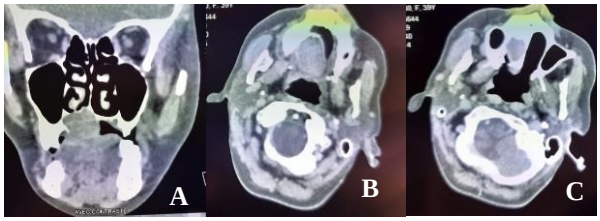

Figure 2: (A) Coronal; and axial (B and C) sections showing a decortication of the lower wall of the right nasal fossa (palatine bone) by a tissue like mass enhanced moderately by the contrast product.

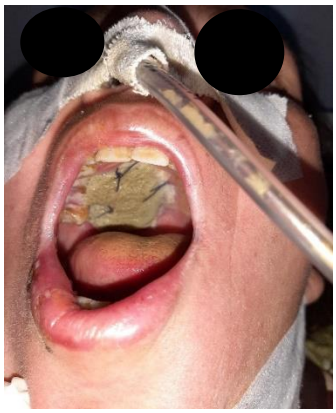

Figure 3: Day 1 post-operative tumor resection by endobuccal route with placement of a nasogastric tube.

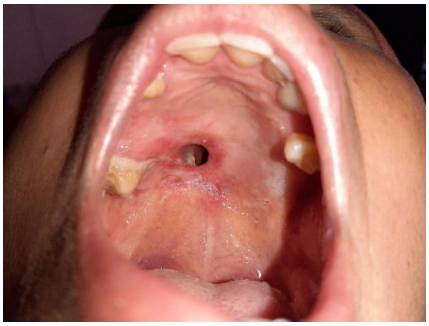

Figure 4: 18 months post-operative with complement radiotherapy sessions.

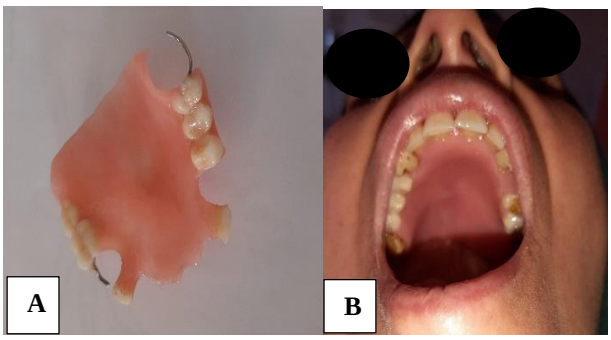

Figure 5: (A) The obturator palatal prosthesis; and (B) its placement on the palate after healing.

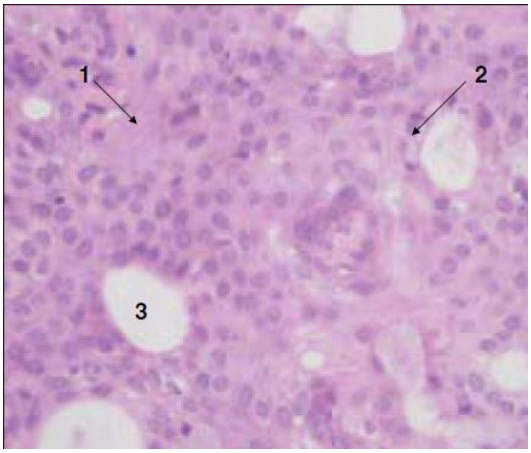

Figure 6: Histological sections, hematoxylin-eosin staining showing a proliferation of squamous cells (1) well-differentiated mucus-secreting cells; and (2) intermediate cells with eosinophilic; and (3) tumor cells intertwine to create multiple cystic formations.

DISCUSSION

Epidemiology

The first description of the mucoepidermoid carcinoma dates back to 1945, constituing the most frequent tumor of the salivary glands, due to the double cellular contingent.[2] There is a slight female predominance and the average age of discovery varies from 40 to 60 years.[3]

The major salivary glands are the most frequently affected in 60%, while the minor ones are affected in 35% of the cases.

The parotid location is the most common 48% of cases, followed by the submandibular and sublingual glands. Localisation in the oral mucosa and palate remains rare.[4,5]

Ethiopathogenesis

It is not well explained and developed, however several assumptions are made- (a) transformation and invasion of glandular cells from the sinus mucosa (mainly maxillary sinus; (b) transformation of the cells of the oral mucosa into odontogenic tissue; (c) persistence of intramaxillary ectopic inclusions of salivary glandular tissue.[6-8]

Histology

Mucoepidermoid carcinoma arises from pluripotent reserve cells of the excretory ducts capable of differentiating into squamous, columnar, and mucous cells.[9]

Its diagnosis is essentially based on the detection of three cell types; as shown in Figure 6.[10] Mucus-secreting cells were positive PAS, diaclase resistant (PAS+, PASD+), forming one or more layers at the edge of the cysts. Intermediate cells which correspond to epidermoid cells with an intermediate appearance between basal cells and well-differentiated elements. Squamous cells which form solid lobules in the border of the cysts.

The differential diagnosis showcased essentially in the acinar cell carcinoma and myoepithelial carcinoma, clear cell adenocarcinoma, melanoma or even Kaposi's sarcoma.[11]

The clinical presentation

The MEC of the palate is mostly manifested as a swelling next to the hard palate, of soft consistency, painless and of insidious evolution; the purplish aspect is not systematically found. Nevertheless, inflammation, swelling with pus, can be seen during episodes of superinfection.

The aggressive character varies from anesthesia, dental mobility to ulceration. The invasion of the nasal cavities or the maxillary antrum is indeed in favor of a late diagnosis.[12]

The management

Surgery remains the treatment of choice, leaning on total excision of the tumor with macroscopically negative mucosal and bone excision margins.

A sane excision margin of 1 cm is recommended because these neoplasms have a slow growth rate and usually do not infiltrate widely.[13]

We associated bilateral lymph node dissection of groups I, II and III in this clinical case in view of the paramedian location of the tumor and bone invasion.[14]

Postoperative radiotherapy must be associated because it improves the prognosis and reduces recurrences.[15,16]

CONCLUSION

The mucoepidermoid carcinoma of the accessory salivary glands is a tumor rarely mentioned in the literature, its early diagnosis prevents a dilapidating surgery. Rigorous clinical and radiological monitoring is necessary for this type of tumor, the origin of which is currently uncertain.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Kajai S, Rizkou FE, Benhoummad O, Rochdi Y, Raji A. Mucoepidermoid carcinoma of the palate: a rare case report. Int J Otorhinolaryngol Head Neck Surg 2022;8:932-5.