CASE REPORT

Spontaneous partial regression of low-grade mucoepidermoid carcinoma of the maxilla

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KEY CLINICAL MESSAGE

Spontaneous regression has been described in all types of cancers. We report the first case of spontaneous regression of a low-grade maxillary mucoepidermoid carcinoma. Study of the mechanisms underlying spontaneous regression of malignant neoplasms opens the door for future treatments.

INTRODUCTION

Malignant neoplasms of the nasal cavity and nasal sinuses are uncommon accounting for 3–5% of all head and neck tumors [1, 2]. The squamous carcinoma is the most frequent type, followed by the adenocystic carcinoma and the mucoepidermoid carcinoma (MEC).

MEC is a malignant epithelial tumor composed of mucosecretory cells and epidermoid cells that originates in the minor salivary mucosal glands. It accounts for 13% of all malignant tumors of the maxillary sinuses, and is more common in females [1]. Histologically, we differentiate three types: those with low, high and intermediate degrees of malignancy according to the cellular proportions, with mucosal cells predominating in the low-grade type [3].

Spontaneous regression has been described in all types of cancers, although it is more frequent in some than others. We present a rare case of spontaneous partial regression of a low-grade maxillary MEC, not previously described in this tumor, in a 50-year-old woman.

CASE DESCRIPTION

A 50-year-old woman was referred for a progressive facial deformity at the left nasogenian sulcus and bilateral gingivolabial sulcus. This painless cystic formation was associated with complete bilateral nasal obstruction.

Exploration of the nasal cavity revealed bilateral purulent rhinorrhea and polypoid formations. The nostrils were completely occluded at the height of the middle third by a tumor of bone consistency. There was also a deformity of the bone palate with a prominence of the same consistency.

Maxillofacial computed tomography (CT) showed a voluminous expansive mass, occupying and destroying the maxilla and nasal fossae with pseudocystic formations and an intraleSIONal calcified matrix. It also affected the ethmoid cells and bulged in the cavum (Fig. 1). Puncture of the gingivolabial tumor was done to obtain 4 ml of serohematic fluid, the analysis of which did not lead to a diagnosis.

Subsequently, abundant biopsies were obtained using a gingivolabial approach, and a definitive diagnosis of low-grade MEC was made.

Since complete excision required a potentially mutilating intervention, and radio- and chemotherapy were not indicated for this tumor, the patient decided to remain under observation without treatment. After 10 years, the patient’s symptoms have improved, the nostrils are permeable, and the facial morphology has not changed. In imaging tests, this improvement can be seen more clearly (Fig. 1B).

DISCUSSION

MEC of the Maxilla is a rare entity [4]. In our patient, the tumor had grown into the maxillofacial region and the effect on the anatomical structures was so profound that curative surgical treatment would have generated a severe iatrogeny, without ensuring complete excision. In fact, one of the reasons for the
recurrence rate was 28.6% and 5-year OS was 70%. They noted surgery or RT alone. Mean follow up time was 57 months; operative RT, the remaining two cases were treated either with post-operative RT, the remaining two cases were treated either with surgery or RT alone. Mean follow up time was 57 months; recurrence rate was 28.6% and 5-year OS was 70%. They noted a clear trend towards better result with the addition of RT to the treatment of these kind of tumors. Early diagnosis, proper surgical approach and associated Rt seems to be the key points for the improvement of overall survival.

According to our literature search, no cases of spontaneous regression of this tumor type have been reported previously.

The mechanisms involved in spontaneous tumor regression may vary, as follows: (i) immune mediation, (ii) inhibition of growth factors, angiogenesis, carcinogens and cytokines, (iii) elimination of or decrease in oncogene expression, (iv) hormonal mediation, (v) psychological factors and (vi) mechanisms that induce apoptosis [6, 7].

Spontaneous regression is possible in MECs of a low maxillary grade. This should be taken into consideration when surgical excision is not possible or would lead to severe iatrogeny. Study of the mechanisms underlying spontaneous regression of malignant neoplasms opens the door for future treatments.

CONFLICT OF INTEREST STATEMENT

None declared.

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Figure 1: Axial magnetic resonance MR slices and T1-weighted sequences after administration of gadolinium with fat saturation. (A) Soft tissue mass in the posterior region of the nostrils that crosses the midline and shows heterogeneous enhancement after contrast administration. There is obliteration of the nostrils, invasion of the right maxillary sinus and remodeling of the left maxillary sinus; both sinuses present with mucosal retention. (B) In the control study, a reduction in mass size was observed, with permeability of the right nasal cavity and absence of mucosal retention in the left maxillary sinus (in relation to the permeability of the meatus)