ATYPICAL FRONTAL SINUS MUCOCELE.
A CASE REPORT

MUCOCELE DEL SENO FRONTAL DE PRESENTACIÓN ATÍPICA.
INFORME DE UN CASO

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ABSTRACT

Clinical case: We report a case of a 46-year-old woman who developed a tender, painful mass in the left superior eyelid over a period of about 6 months. This was a frontal mucocele with atypical clinical and histopathologic features.

Discussion: Most mucoceles arise from the frontal or ethmoidal sinuses. Frontal mucoceles usually cause outward and downward displacement of the globe, and are often associated with fullness in the superonasal and medial canthal region and a palpable mass (Arch Soc Esp Oftalmol 2006; 81: 611-614).

Key words: Mucocele, frontal sinus, mucopyocele, computed tomography,

INTRODUCTION

Mucocele of the paranasal sinuses are a frequent cause of orbital problems in adults (1) because they constitute slow-growth cystic lesions caused by an obstruction of the paranasal sinus, with ensuing entrapment of the mucous-secreting epithelium. Said lesions can extend to the adjacent orbit, the nasal-pharynx area or the cranial cavity (2).

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CASE REPORT

A 46-year-old woman admitted to hospital in March 2005 due to a painful mass in the external third of the left upper eyelid with a 6-month evolution, accompanied by ipsilateral visual acuity (VA) reduction. The patient referred the development of
a similar mass 15 years before admission which was successfully managed with unspecified medical treatment.

The rest of the patient’s history is not relevant to her current condition.

The ophthalmological exploration revealed a VA of 0.7 in the right eye (RE) and 0.2 in the left eye (LE). The external third of the upper left eyelid there was a mass measuring 4 x 3.5 cm, which was painful and exhibited ptosis and inferior displacement of the eye on the same side (fig. 1). The patient exhibited limitation to levosupraversion of the LE. Exophthalmometry with basis 100 gave 17 mm for both eyes.

The palpebral opening was of 10 mm in the RE and 4 mm in the LE. The function of the left elevator muscle was limited.

A computerized tomography was requested of both orbits, with axial and coronal sections, which showed a cystic temporal mass with bone destruction which invaded the orbit and displaced the left eye downwards, apparently depending on the frontal sinus (figs. 2A and 2B).

The mass was aspirated, obtaining a yellowish, dense liquid. A smear thereof showed a small amount of Gram-positive cocci in pairs and chains, accompanied by numerous polymorphonuclear leukocytes and abundant mucosity. Treatment was initiated with ampicillin, dicloxacillin and naproxene orally and sulphacetamide topically.

The patient underwent a drainage of the paranasal sinus with removal of the wall. Microscopically, the preparations dyed with hematoxiline and eosin exhibited fragments covered by breathing-type epithelium. Under the epithelium, the wall was made up by dense connective tissue stroma with hemorrhage areas mixed with accumulations of inflammatory infiltrate comprised by mature leucocytes, plasmatic cells, polymorphonuclear leucocytes and numerous eosinophiles (figs. 3A and 3B). The diagnostic of frontal sinus mucocele was established. The presence of a large amount of eosinophiles as part of the inflammatory infiltrate suggested a probable etiology of the allergic or hyper-sensitivity type.
DISCUSSION

Patients with Mucocele in the paranasal sinuses frequently exhibit headaches, proptosis, alterations in eye mobility or VA reduction (1).

The most serious complication of periorbitary Mucocele is the loss of vision due to the compression of the ocular globe which damages the optic nerve and the posterior pole (1-4).

The most frequent areas where Mucocele originate are the frontal sinuses followed by ethmoidal sinuses (3). In general, Mucocele develop more with eye displacements than with proptosis. In frontal Mucocele, the eye globe deviation frequently occurs downward and outward, whereas in ethmoidal Mucocele the displacement is more lateral. Frontal Mucocele can be palpated below the anteromedial orbital edge.

This case exhibited a downward deviation of the eye but, in contrast to the reports found in literature, the main increase in volume was found in the left upper temporal region.

Histopathologically, the most frequent findings in Mucocele are the presence of a predominantly mono-nuclear inflammatory process in the sub-epithelial connective tissue, made up mainly by mature lymphocytes and plasmatic cells. In prolonged cases with chronic inflammation and irritation of the respiratory epithelium, it is frequent to find squamous metaplasia changes in the covering epithelium.

In this case, in addition to the elements mentioned above, a high number of eosinophiles was evidenced, as is the case in some other lesions of the upper respiratory tract related to allergic antecedents such as the so-called inflammatory or «allergic» polyps (5).

To the best of our knowledge, this seems to correspond to the first reported case of frontal mucocele associated to a probable allergic or hypersensitivity etiology.

BIBLIOGRAFÍA