MUCCOEPIDERMOID CARCINOMA OF THE LACRIMAL SAC – A RARE CASE REPORT

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ABSTRACT

A case of mucoepidermoid carcinoma of the lacrimal sac was considered worth reporting because of its rarity in the location. Here we present 75 years old man with the swelling near the medial canthus of the eye for the past 6 months. He was clinically examined and diagnosed with the help of routine investigations, Probing and syringing techniques, Ultrasound and Computerised Tomogram of the Coronal view of the head. Mucoepidermoid carcinoma is a tumour composed of neoplastic mucin-producing cells and epidermoid cells. Although it most frequently affects the salivary glands it has also been reported in the ophthalmological literature in the conjunctiva, lacrimal gland, and lacrimal sac. Here we are presenting a case of Mucoepidermoid carcinoma of the Lacrimal sac because of its rarity in a rare location

**Key Words:** Mucoepidermoid, Lacrimal Sac, Epiphora and Diplopia

INTRODUCTION

Tumors originating from the lacrimal sac are exceedingly rare. They may mimic chronic inflammation and be misdiagnosed, delaying treatment and allowing the tumor to devastate the visual system. Mucoepidermoid carcinoma has been described. **Mucoepidermoid carcinoma** is a tumour composed of neoplastic mucin-producing cells and epidermoid cells. Although it most frequently affects the salivary glands it has also been reported in the ophthalmological literature in the conjunctiva, lacrimal gland and lacrimal sac. Mucoepidermoid carcinomas of the salivary and bronchial glands are characterized by a recurrent t(11;19)(q21;p13) chromosomal translocation resulting in a MECT1-MAML2 fusion gene. Occurs in adults, with peak incidence from 20–40 years of age. Presents as painless, slow-growing mass that is firm or hard.

CASE REPORT

A 75 years old male patient came with Right medial canthal swelling since 3 months, Epiphora, Diplopia, Nasal obstruction with discharge.

**ON EXAMINATION** A swelling over the right medial canthus, oval, hard, non tender Floor of frontal sinus to 3cm below medial canthus on right side Probing and syringing Showed Obstruction. The patient’s visual acuity reduced in both eyes due to cataract. There was no purulent or hemorrhagic discharge from the right Lacrimal duct. Fig. 1 Computed tomography of the coronal view demonstrating mass lesion at the lacrimal sac region.

![CT scan](image)

**Figure 1:** The blockage of the osteomeatal complex on right side

Axial view demonstrating medial mass lesion at the lacrimal sac region. Mass was pushing right eye ball laterally. At surgery the mass was found to be adherent to skin and firmly fixed to underlying periosteum. When removed Grossly it measured 6x4x2cm Microscopic examination of this specimen showed malignant Squamous areas, mucin filled cystic areas, and intermediate cells with considerable dedifferentiation and with hyperchromatism and mitotic
activity. Normal lacrimal sac mucosa was identified, with tumour in the deeper layers, and there was extensive infiltration of muscle. Cystic glands lined by malignant columnar epithelium, clusters of intermediate cells and irregular islands of malignant epithelium with pronounced nuclear atypia. Impression: G-III High grade mucoepidermoid carcinoma.

Figure 2: Tissue in which lay scattered numerous islands of squamous cells in different configurations

Figure 3: Squamous cells and microcystic area (H & E, x 32)

There were foci of microcystic areas and many scattered clear cells could be seen. Bundles of voluntary muscle were scattered throughout, with evidence of muscle invasion as well as some degree of secondary myositis. At postoperative day 10, the patient noted a satisfactory cosmetic effect. No radiotherapy was given. postoperatively. Clinical Follow up suggested.

DISCUSSION
The occurrence of this tumour in other sites is well defined in both the pathological and general surgical literature. Seven cases have been reported in the conjunctiva’1 Harry and Ashton reviewed lacrimal sac tumours in the files in
the Department of Pathology at the Institute of Ophthalmology in London over a 20-year period (1948-1967). Three more were reported by Ni et al., (1983) from Shanghai. Thirteen cases were found, eight being epithelial in origin, and they concluded that all of these were of transitional cell type. They classification of: type 1 (transitional cell papilloma); type 2 (intermediate transitional cell tumour); and type 3 (transitional cell carcinoma) (Searl et al., 1982). Squamous metaplasia was a feature of many of the growths, but Mucoepidermoid tumours per se were not described. So far as can be ascertained, there are only four reports of mucoepidermoid tumours arising in the lacrimal sac (Font & Gamel, 1978), the first case being described in Brazil by Bambirra et al., (1981) postulate that mucoepidermoid carcinoma in the lacrimal sac area may arise from either lacrimal sac mural serous gland epithelium or from the columnar epithelium of the conjunctiva with its goblet cells. These tumours may infiltrate locally and rarely metastasise; only in very few cases does invasiveness assume serious proportions. All patients reported upon with mucoepidermoid carcinoma underwent exenteration (Rao & Font, 1976) and the early invasion of near-by voluntary muscle would tend to confirm that this may be the required procedure. This option was not readily open to us, since from the standpoint of visual acuity we were dealing with an only eye. The advanced age of the patient also argued in favour of a conservative approach, which in the event allowed her five years of good vision. Prognosis, now that further surgery has been declined, is poor: vision will be lost through exposure keratitis and optic atrophy

CONCLUSION
In summary the management of MEC in a Lacrimal sac is very challenging. The importance of ruling out tumors in a Lacrimal passage block is always emphasized. A possible association with Papilloma Virus for MEC has been reported. Generally, there is a good prognosis for low-grade tumors, and a poor prognosis for high-grade tumors. A causal link with Cytomegalovirus (CMV) has been strongly implicated in a 2011 research (Melnick et al., 2012).

REFERENCES