

## Synchronous Mucoepidermoid Carcinoma of the Right Upper Eyelid and Right Parotid Gland in a Young Patient

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### ABSTRACT

Mucoepidermoid carcinoma and squamous cell carcinoma are tumors found predominantly in the elderly. Most of the cases reported were from patients of more than 50 years old. In our case, it affects a young patient, a 26 year old lady who has a history of a severely burnt and scarred face since childhood. She represents a rare case of a high grade aggressive tumor involving her right eyelid and right parotid gland.

**Keywords:** Mucoepidermoid, carcinoma, parotid tumor, eyelid

### INTRODUCTION

Mucoepidermoid carcinoma is a relatively common neoplasm that affects the major and minor salivary glands comprising 10–30% of primary carcinomas.<sup>[1]</sup> They may involve the skin through direct extension, metastases, and rarely, as a primary focus (adenosquamous carcinoma).<sup>[1]</sup> Our patient presented with extensive tumor of the upper eyelid, which later was confirmed as mucoepidermoid carcinoma with areas of squamous cell carcinoma transformation. It was difficult to determine the origin of the tumor; possibilities include upper eyelid epithelium, accessory lacrimal gland, sweat gland or other skin appendages.

### THE CASE

A 26 years old lady, with a history of burn on the face during childhood, first presented with a small ulcerative nodule like lesion at the right upper eyelid for few weeks duration. The lesion was progressively increasing in size and associated with pain and foul discharge with contact bleeding. An excisional biopsy was performed by a general practitioner, and was then referred to our center for further management.

Examination at the time of presentation showed a 10 x 7cm fungating mass over the right periorbital region. The surface was ulcerated and partly covered with exudates and foul- smelling discharge. The conjunctiva was injected with central corneal opacity.

She was also noted to have a right parotid swelling which is hard in consistency. There was involvement of the overlying skin which also displaced the ear lobe. There was no palpable cervical lymphadenopathy.

Computed tomography scan of the head and neck demonstrated an irregular heterogeneously enhancing soft tissue lesion involving the orbit. Medially, the mass extended to the right side of the nasal bridge, associated with soft tissue thickening extending to the frontal sinus area. The right parotid gland was enlarged measuring 4.0 x 2.0 x 4.5 cm with central necrosis. The deep lobe of the parotid gland was normal. Magnetic resonance imaging revealed right frontal bone involvement with frontal lobe dura enhancement.

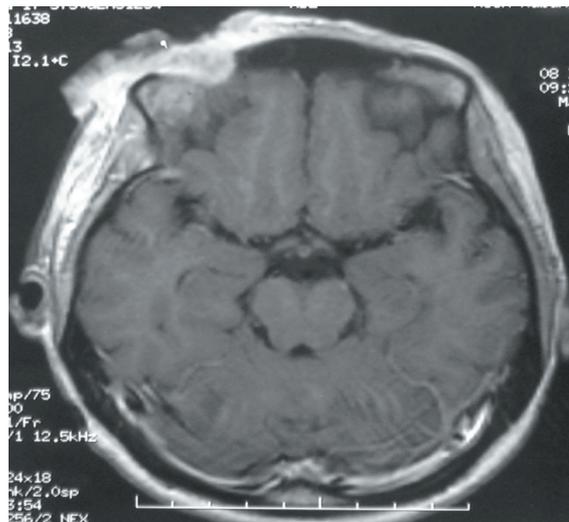
These clinical and radiological assessments indicate a malignancy which was further confirmed by the biopsy result which showed squamous cell carcinoma of right upper eyelid with intraorbital extension.

Resection of right upper eyelid tumour with right total orbital exenteration, right total parotidectomy with excision of upper branch of facial nerve were performed together with removal of right orbital rim and coagulation of tumour attached to dura. Reconstruction was done by using free myocutaneous latissimus dorsi flap. Full histopathology report of the right periorbital specimen confirmed the diagnosis of extensive mucoepidermoid carcinoma with areas of transformation into squamous cell carcinoma. The right parotid showed a high grade mucoepidermoid carcinoma.

The patient had an uneventful post-operative recovery. The patient was referred to oncology department for further palliative radiotherapy.

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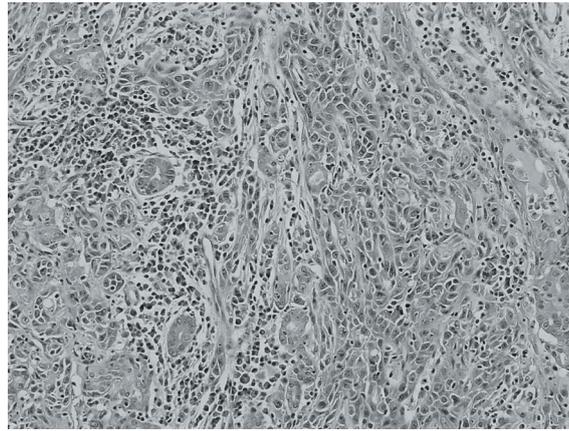
**Figure 1.** Axial MRI revealed right frontal bone involvement with frontal lobe dura enhancement



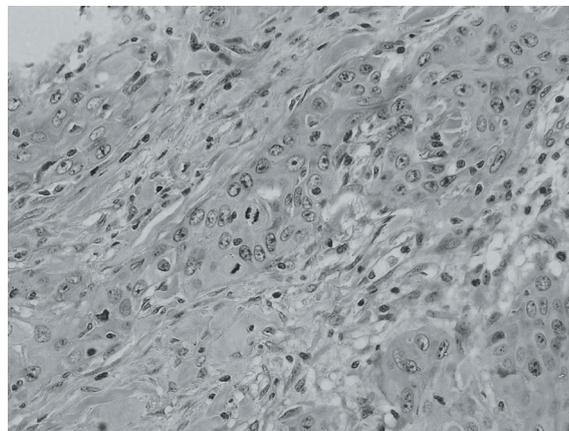
**Figure 2.** The enhancing lesion was also seen in the right parotid on coronal section



**Figure 3.** Fungating mass on the right periorbital region and the enlarged parotid gland with overlying skin involvement



**Figure 4.** Microscopy shows feature of squamous cell carcinoma with presence of glandular differentiation (x20)



**Figure 5.** Areas of pure squamous cell carcinoma (x40)

## DISCUSSION

Mucoepidermoid carcinoma is a relatively common tumor involving major and minor salivary glands. It can present as a primary focus, direct extension to skin or distant metastasis. Primary mucoepidermoid carcinoma of the skin or sometimes referred to as cutaneous adenosquamous carcinomas has been hypothesized to be arising from the sweat glands.<sup>[1]</sup> This is supported by the fact that salivary glands and eccrine glands in the skin are both ectodermal structures and may express similar properties with regard to mucin production.<sup>[2]</sup> However, Landman and Farmer suggested that primary cutaneous adenosquamous carcinoma represents a separate and distinct entity with a higher aggressive potential.<sup>[2]</sup>

There were only few case reports of mucoepidermoid carcinoma of the upper eyelid, particularly arising from an accessory lacrimal gland.<sup>[1,3]</sup> In one of the cases, orbital exenteration was done due to the supratrochlear neurovascular bundle involvement, exhibited by perineural invasion of the mucoepidermoid carcinoma.<sup>[3]</sup>

It was interesting to note that our patient was having synchronous tumours of the right parotid and right upper eyelid. Synchronous and/or metachronous malignancies at both lacrimal and parotid gland sites are infrequent events which frequently lead to diagnostic and clinical difficulties.<sup>[4]</sup> Klijanienko *et al.* observed that patients with primary parotid lesions exhibited more aggressive behavior than those with primary lacrimal tumors; all patients with parotid primaries died of metastatic disease, while patients with primary lacrimal had a protracted and less aggressive course.<sup>[4]</sup>

A primary parotid tumor metastasizing to the lacrimal gland would be a manifestation of hematogenous metastases; in contrast, a lacrimal gland tumor metastasizing to the parotid gland would be a manifestation of lymphatic spread.<sup>[4]</sup> In this case, the latter is more likely if metastatic disease is to be considered. This is because the eyelid lesion was present few years before the right parotid mass which manifested only as a lesion near the ear lobe. The right parotid lesion was confirmed only on MRI.

Apart from lacrimal gland metastases, it is also important to be aware of the fact that mucoepidermoid from a primary tumor in the salivary gland can spread to the skin.<sup>[5]</sup> There are at least three well-documented cases of mucoepidermoid carcinoma of salivary gland which metastasized to the skin.<sup>[6-8]</sup> In this case, the possibility of primary mucoepidermoid carcinoma of the parotid gland which metastasized to the skin overlying the lacrimal gland should be considered.

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