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# Metastatic Adeno Carcinoma of Meibomian Gland: A Case Report

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**Abstract:** Meibomian gland carcinomas are very rare and constitute 1% of all malignant tumors of the eye lid. They are often mistaken for Chalazion and excised. It's malignant nature being recognized only when it recurs repeatedly. They are locally invasive and metastasize to liver brain and lymph nodes. A case of adenocarcinoma of meibomian sebaceous gland with post operative metastases to parotid gland and pre auricular lymph nodes is reported.
**Keywords:** Meibomian gland tumors, Parotid and Pre auricular node metastases, Adeno carcinoma

## INTRODUCTION

Adenocarcinoma of the meibomian sebaceous glands are relatively rare tumors accounting for about 1% of all malignant tumors of the eyelid [1]. It is often mistaken for a chalazion and its malignant nature being recognized only when it recurs repeatedly. This is also one of the most lethal eyelid tumors, second only to malignant melanoma of the eyelid. Five year and ten year mortality rates reported are 15% and 28% respectively [2]. The high mortality rate is probably related to the delay in diagnosis occasioned by the tumor being mistaken for an inflammatory lesion or basal cell or squamous cell carcinoma. Clinical symptoms may be present for more than four years before the true diagnosis is suspected [1].

An interesting case with post operative parotid gland and pre auricular lymph node metastasis of primary adenocarcinoma of the Meibomian Sebaceous gland is reported in the present case study.

## CASE STUDY

A 46 yr old female patient underwent complete excision in a Cutler-Beard Stage 1 procedure on 18/07/2011 and two months later the Stage 2 for mass lesion on right eye upper eye lid. She was seen earlier for pricking sensation, swelling and purulent discharge after an insect bite. The swelling was steadily increasing in size and decreasing vision (6/18).The mass was of 2.45cm size and 4cm from lateral canthus. The surface was irregular with well defined margins, firm in consistency and non tender. There was a cortical cataract in the RE and a post-cortical cataract in the LE. Otherwise ophthalmic examination was normal. There was no lymphadenopathy. Examination of the operated specimen showed a 1cm size nodule in the eyelid which was ulcerated on the corneal surface. Cut section showed a homogeneous mass lesion. Tumor Microscopy showed stratified squamous epithelium over lying tumor tissue composed of sheets and trabeculae of loosely packed polygonal cells with extremely pleomorphic and hyper chromatic nuclei. Numerous mitotic figures, often atypical, were seen. Complex tumor mass with glandular and small acinar spaces were seen. In other areas normal sebaceous glands were seen. The picture was consistent with the diagnosis of meibomina adenocarcinoma.

Subsequently the patient was lost to follow-up. Patient presented with a swelling in the right parotid region. On examination there was a smooth, round, non-tender swelling measuring 2cm by 4cm with ill-defined borders. Clinically this was suggestive of a parotid swelling but in view of the history of meibomian gland adenocarcinoma the possibility of a pre-auricular or parotid gland metastasis was considered.

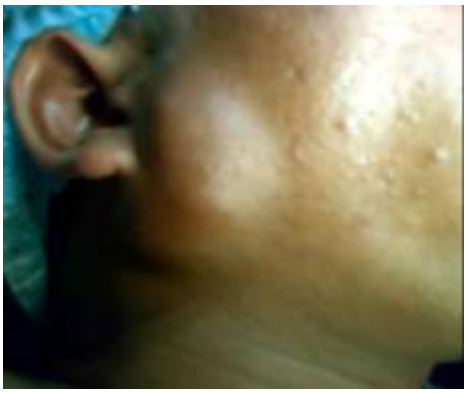

**Fig. 1: Photograph showing swelling in the right parotid region**

Fine Needle Aspiration Cytology was done from the swelling. The smear showed extensive areas of hemorrhage, proteinaceous material, nodules of foam cells and hemosider in laden macrophages. Occasional giant cells, lymphocytes and neutrophils were seen. Two malignant papillary clusters of cuboidal cells with hyperchromatic nuclei, coarse chromatin and prominent nucleoli were seen. The cytological diagnosis was metastatic carcinoma with cystic and degenerative changes, consistant with metastatic meibomian carcinoma. She underwent total Parotidectomy. At surgery tumor was seen involving superficial and deep lobes of the parotid and masseter muscle. Facial nerve was completely surrounded and had to be sacrificed. Upper deep cervical nodes were involved and were removed.

On gross examination of the specimen consisted of the paroted gland weighing 20gm. Cut section showed irregular yellowish white tissue infiltrating the parotid with areas of hemorrhage and necrosis. Foci of cystic degeneration were seen. Two lymph nodes were isolated. Macroscopically the parotid gland was infiltrated by polygonal cells with abundant granular cytoplasm, vesicular nucleus and prominent nucleoli. Areas of necrosis were seen. Salivary gland showed hemosiderin-laden macrophages, fibrosis and hyalinization. Cystically dilated ducts were present. One of the lymph nodes showed metastasis. The picture was that of metastatic poorly differentiated meibomian gland adenocarcinoma. Patient was advised to go for post operative radiotherapy and lost to follow up.

## DISCUSSION

Adenocarcinoma of the meibomian gland usually presents as a painless nodule in the upper eyelid in patients aged between 40 and 80 years [3]. Even it can occur in much younger subjects aged between 3 to 11 years [4]. Though Doxanas [1] reported male predominance other authors have reported a female preponderance [1,2,5]. Majority of lesions are seen in the upper eyelid. In contrast to equally distributed benign tumors in both upper and lower lids [2,6,7] malignant melanoma was also seen more in the upper eyelid. Interestingly, Tesluk [6] reported more chalazia in the lower eyelid. Sebaceous gland carcinomas can be locally invasive. Bonuik and Zimmerman [5] found 17% local invasion and 24% lymph node metastasis [3]. Local invasion can occur into the base of skull [3] and intracranial into the brain [8]. Distant hematogenous metastases can occur in the liver, lung, brain [6], Lymph node metastases are usually to the pre auricular, parotid, sub maxillary and cervical lymph nodes [3]. The incidence of metastases to the parotid salivary gland and lymph node appears to be quite rare Nunery *et al*. [9].

Histopathologically an acinar pattern resembling a normal gland may be seen although cells may be arranged in sheets, cords or clusters. Some cells may be large with abundant vacuolated cytoplasm [11] Pagetoid changes (extra mammary Paget's disease) may occur [12]. Squamous or basal cell changes are reported to increase the five year mortality from 20% to 50%. Rao *et al*. [2] reported that poorly differentiated tumors have four year mortality of 60% as against 7% for well differentiated tumors [6]. Treatment is often delayed due to delay in diagnosis. But once diagnosed the ideal treatment appears to be complete excision with tumor free margins [1], Radiotherapy as the primary modality of treatment has been tried. However Nunery *et al*. [9] reported unsatisfactory results often followed by local recurrence and lymph nodal metastasis [10].

In summary meibomian adenocarcinomas of the eyelid are relatively rare tumors. Early diagnosis and treatment is important, since this is one of the more lethal eyelid neoplasms.

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