



SEBACEOUS CARCINOMA OF THE EYELID : CLINICAL AND HISTOPATHOLOGICAL CORRELATION

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ABSTRACT **Introduction:** Sebaceous gland carcinoma is a rare disease that typically develops in the periocular region. It is thought to be the third most common eyelid malignancy after squamous cell and basal cell carcinomas, accounting for 1–5.5% of all eyelid malignancies. However, a few investigations ranked this tumor as the second most prevalent after basal cell carcinoma. It typically affects older women and is marked by a high rate of distant, regional, and local metastases. Due to the tumor's capacity to mimic more benign illnesses, a delayed diagnosis frequently results in improper treatment and higher rates of morbidity and fatality. **Material and Methodology :** A 51-year-old male presented to Maharani Laxmi Bai Medical College, Jhansi, with a right upper eyelid mass. Detailed ocular and systemic examinations were performed. The patient was admitted and underwent excisional biopsy of the eyelid lesion under local anaesthesia. HPE of the excised tissue confirmed sebaceous carcinoma of the eyelid. **Histopathological Examination:** HPE revealed an invasive malignant epithelial neoplasm composed of nests, lobules, and sheets of atypical sebaceous cells separated by fibrovascular stroma. The tumor cells showed vacuolated cytoplasm, marked nuclear pleomorphism, hyperchromasia, prominent nucleoli, and frequent mitotic activity. Focal areas of foamy sebaceous differentiation were present, with irregular infiltration into the surrounding stroma. These findings were consistent with a diagnosis of sebaceous carcinoma of the eyelid. **Immunohistochemistry:** IHC played a key role in confirming the diagnosis of sebaceous gland carcinoma. The tumor cells showed positivity for adipophilin, androgen receptor (AR), EMA, and cytokeratins, supporting sebaceous differentiation and epithelial origin. An elevated Ki-67 proliferation index and p53 overexpression further supported the malignant nature of the lesion. Adipophilin expression was particularly useful in demonstrating intracellular lipid droplets and confirming sebaceous differentiation. **Management Options :** Following HPE confirmation of sebaceous carcinoma, the patient was referred to a higher center for oncological evaluation, staging, and definitive management. Early and complete surgical excision remains the cornerstone of treatment, often combined with conjunctival biopsies to assess pagetoid spread. Advanced cases may require orbital exenteration, radiotherapy, chemotherapy, or regional lymph node dissection. Despite adequate treatment, sebaceous carcinoma has a significant risk of local recurrence, necessitating long-term follow-up.

KEYWORDS :

INTRODUCTION

Meibomian glands, Zeis glands, or glands connected to the caruncle may be the source of sebaceous gland tumors of the eyelids.^[1] They are classified as adnexal skin structures, or tumors of the epidermal appendages. After basal cell carcinoma (BCC), sebaceous gland carcinoma (SGC) may be the second most prevalent cancer of the lids. It has a distinct position among eyelid cancers due to its multifocal origin and pagetoid dissemination.

The caruncle, eyebrow skin follicles, and periocular skin all contain sebaceous glands. The tumor is extremely uncommon, grows slowly, and is frequently detected in older people who are more likely to be female. The tumor has been reported in children as young as 3.5 years old, but the average age of diagnosis is in the mid-sixties.^[2] Oriental Asians are more likely to have it than Caucasians. In the USA, the reported incidence of SGC ranges from 0.5 to 5% of all lid carcinomas, but in China, it is 28%.^[3,4] Although the cell of origin may not be known in 50–60% of instances, SGC most frequently originates from the meibomian glands anterior to the gray line, infrequently from the glands of Zeis or Moll, and from sebaceous glands in caruncle.^[5] Because there are more meibomian glands in the upper eyelid, SGC is two to three times more common there than basal cell carcinoma (BCC) or squamous cell carcinoma (SCC).^[3,6] Due to intraepithelial spread and/or spontaneous creation of multiple primary, 5% of cases may affect both eyelids at the same time.

On the one hand, it can resemble a benign disease like blepharconjunctivitis; on the other hand, it might have deadly distant metastases and broad local dissemination. The diagnosis, treatment, and prognosis of SGCs have been significantly improved thanks to immunohistochemistry, molecular biology, and electron microscopy. Treatment for SGC includes radiotherapy, chemotherapy, and surgery.

MATERIAL AND METHODOLOGY

This is a case report of a 51 years old male patient who came to Maharani Laxmi Bai Medical College, Jhansi, with sebaceous carcinoma of the right upper eyelid and immature senile cataract in left eye. Detailed ocular and systemic examination were done to rule out any other abnormalities, which included history of the presenting illness, visual acuity using snellen's chart and complete ocular examination using slit lamp, intra-ocular pressure using non-contact tonometer. Blood was sent for routine laboratory investigations. Patient is admitted for conservative management and planned for excisional biopsy of the lesion in OT under local anaesthetics and the sample was sent for histo pathological examination.

Case Report

A 51 years old male presented with complaints of multiple swellings over right upper eyelid from past 1 year which was insidious in onset and gradually progressive in nature. It was 2.5 x 1.5 cm in size, irregular in shape, non-tender, non-mobile and firm in consistency. It was associated with watering, redness, foreign body sensations and mucopurulent discharge. He has a past history of chronic use of multiple topical medications. There is no known instance of ischemic heart disease, diabetes, asthma, chronic obstructive pulmonary disease [COPD], or hypertension.

Ocular Examinations

Table : 1

O/E	RIGHT EYE	LEFT EYE
Vision	Hand movement +ve	Finger count at 3m
BCVA	Hand movement +ve	6/36
Perception of light	Present	Present
Projection of rays	Present in all 4 quadrants	Present in all 4 quadrants
Orbital Margins	Intact on palpation	Intact on palpation

Eyelid Examination (Right Eye)

A solitary nodulo-ulcerative, lobulated, pinkish-red mass measuring approximately 2.5×1.5 cm was noted arising from the right upper eyelid margin, involving the central and medial one-third of the lid. The lesion was exophytic with an irregular surface and prominent vascularity [Figure: 1].

Areas of surface ulceration with exudative deposits were present. The mass caused marked distortion and thickening of the upper eyelid margin with associated loss of eyelashes (madarosis) over the involved segment. Mechanical ptosis was present, partially obscuring the visual axis [Figure: 2].



Figure : 1



Figure : 2

The lesion appeared to extend onto the posterior lid margin/tarsal conjunctival surface [Figure: 3]. The surrounding skin showed no obvious ulceration or satellite lesions. There was no clinically evident fixation to the underlying orbital structures, and orbital margins were palpable and intact.



Figure : 3

Provisional Diagnosis

On the basis of history and ocular examinations, the provisional diagnosis is Sebaceous carcinoma of the right upper eyelid.

Plan of Treatment

Mass excisional biopsy was scheduled for the right eye upper eyelid mass, and the removed tissue was sent for Histopathological Examination. All routine blood investigations, serology, ECG and chest x-ray were within normal limit.

Procedure

Under sterile aseptic precaution, Local anaesthetic was given to upper eyelid of right eye. Right eye was painted and draped. A small chunk of mass was excised. After the eye was patched, the removed tissue was sent for pathological and microbiological analysis. Haematoxylin and eosin (H&E) was used to stain the tissue. A light microscope analysis

of the stained section verified that it was sebaceous carcinoma of eyelid.

Histopathological Examination

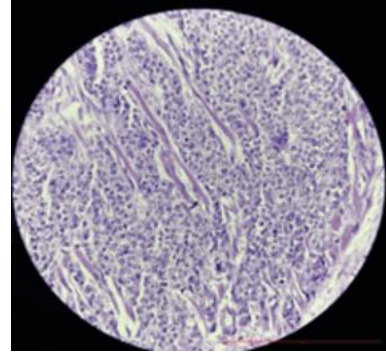


Figure : 4

Sections show an infiltrating neoplasm arranged in nests, lobules, and sheets of atypical epithelial cells separated by fibrovascular stroma. The tumor cells are polygonal with moderate amounts of vacuolated to finely granular cytoplasm suggestive of sebaceous differentiation.

The nuclei are enlarged, pleomorphic, hyperchromatic, and exhibit prominent nucleoli. Increased nuclear-to-cytoplasmic ratio and frequent mitotic figures are noted. Focal areas demonstrate cells with multivacuolated (foamy) cytoplasm.[Figure : 4]

The tumor infiltrates the surrounding stromal tissue in an irregular pattern. No definite keratin pearl formation is identified in the provided field. Assessment of lymphovascular invasion, perineural invasion, pagetoid spread, and margin status would require examination of the entire specimen.

M L B MEDICAL COLLEGE & HOSPITAL, JHANSI
DEPARTMENT OF PATHOLOGY

Date : 21-May-2026 UHID/Ref: 127136 / 30631 Collected At : M L B MEDICAL COLLEGE
 Name : _____ Ref By : _____ App/Sex : 51 Yrs/Male
 Serial No : N/A Phone : _____ Ward : IPD
 Requested Test : HISTOPATHOLOGY
 Received on : 21-May-2026 02:14 PM Reported on : 08-Jun-2026 10:38 AM Printed on : 08-Jun-2026 10:39 AM

HISTOPATHOLOGY

HISTO PATH No.: H-151526
 SPECIMEN: RIGHT UPPER EYE LID SWELLING
 GROSS: Received a bottle labeled as eye lid swelling containing a single greyish brown to greyish black, soft to firm tissue pieces. Total weighing 0.2 gm. Whole tissue is embedded.
 MICROSCOPIC: Section shows an irregular tumor arranged in lobules of pleomorphic basaloid cells with scattered mature sebocytes. Many atypical mitotic figures are also seen. Adjoining area shows lymphoplasmacytic infiltrates.
 IMPRESSION: FINDINGS ARE SUGGESTIVE OF - SEBACEOUS CARCINOMA.
 NOTE: Advise- Immunohistochemistry and clinical correlation for further confirmation.

Figure : 5 (HPE Report of the Patient)

Immunohistochemistry

Table : 2

Marker	Typical Result in Sebaceous Carcinoma	Significance
Adipophilin	Positive	Highly sensitive marker highlighting lipid droplets in sebaceous differentiation.
Androgen Receptor (AR)	Positive	Frequently expressed in sebaceous carcinoma.
EMA (Epithelial Membrane Antigen)	Positive	Supports sebaceous differentiation.
Cytokeratins (CK7, Pan-CK)	Positive	Confirms epithelial origin.
Ber-EP4	Variable/Focal	Helps distinguish from basal cell carcinoma.
p53	Often overexpressed	Commonly mutated in malignant lesions.
Ki-67	Elevated	Indicates high proliferative activity.
Oil Red O / Sudan Black	Positive on frozen sections	Demonstrates intracellular lipid (not routine IHC).

Management Options

Following histopathological confirmation of sebaceous carcinoma of the eyelid, the patient was referred to a higher center for further oncological evaluation, staging workup, and definitive management.

The initial intervention for sebaceous carcinoma is frequently insufficient. Depending on the tumor's stage upon presentation, several treatment options include radiation, chemotherapy, orbital exenteration, radical neck dissection, and local excision. Early on, wide excision is crucial. Prior to surgical excision, the patient should be closely examined for any conjunctival alterations, such as telangiectasia, papillary change, or a mass, as well as for signs of pagetoid spread or multicentric origin, such as double eversion of the eyelids. In this case, surgical excision of the lid lesion should be combined with conjunctival punch biopsies.^[7]

Orbital exenteration and local excision are two possible surgical procedures. The most popular and successful course of treatment is radical surgical excision with frozen section control using either a conventional procedure or Moh's micrographic surgery. To the greatest extent feasible, the wound edges should be approached. After resection, about 30% of sebaceous gland carcinoma return.^[8]

Disclosure

All the photographs used in this journal have been published after obtaining informed consent and permissions from the patient.

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Conflicts of Interest: Nil

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