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Case Report

Ophthalmology Section

Sebaceous Carcinoma of the Eyelid Masquerading as a Benign Lesion: A Rare Case Report

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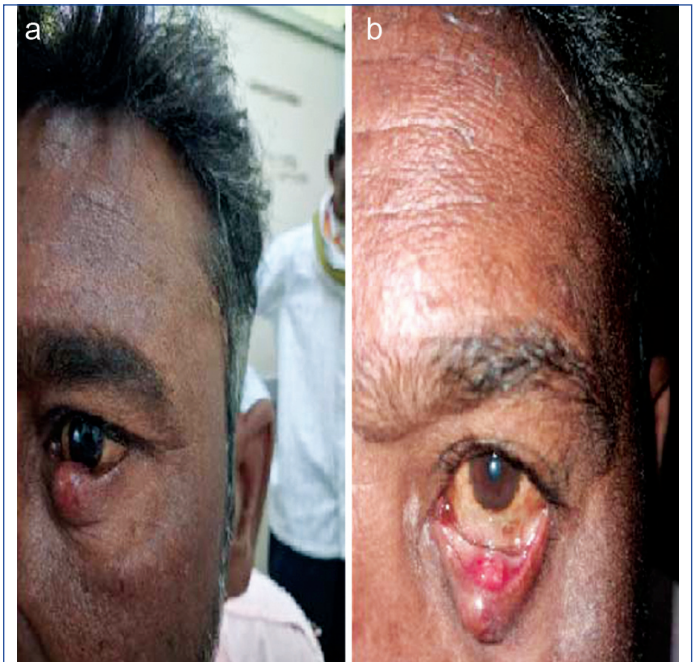
ABSTRACT

Sebaceous carcinoma, a rare and aggressive malignancy originating from sebaceous glands, is commonly observed in the Asian population and associated with syndromes like Muir-Torre syndrome and prior radiation therapy. Clinically, it often mimics benign conditions such as chalazion or blepharitis, thereby delaying diagnosis. This case report discusses an 80-year-old male presenting with progressively enlarging masses on the upper and lower left eyelids. Magnetic Resonance Imaging (MRI) suggested neoplastic aetiology, and surgical excision confirmed sebaceous carcinoma through histopathology and immunohistochemistry, with strong positivity for Cytokeratin 7 (CK7) and Epithelial Membrane Antigen (EMA). Histological examination revealed malignant epithelial cells arranged in islands & ribbons, with basaloid cells, squamous epithelial pearl formation, and comedonecrosis. These findings highlighted the tumour's aggressive nature and the need for comprehensive management. Postoperative recovery was uneventful, but follow-up was emphasised due to high recurrence risk.

Keywords: Benign conditions, Eyelid malignancies, Muir-Torre syndrome, Periocular tumours

CASE REPORT

An 80-year-old male presented to the Department of Ophthalmology with progressively enlarging mass over the left upper and lower eyelids for six months, associated with cosmetic disfigurement. Six months ago, the patient observed a little swelling above the left eyelids, which grew larger over time [Table/Fig-1a,b]. There was no accompanying ulceration, bleeding, discharge, or visual problems; the masses were hard, painless, and gradually growing. He sought medical assessment because of the noticeable development and cosmetic concern. No past history of cancer or abnormalities on the eyelids. No known family history of skin malignancies or similar eyelid lesions. No relevant occupational exposure or history of trauma mentioned.



[Table/Fig-1]: a) A nodular, erythematous swelling of the lower eyelid causing lid distortion and conjunctival congestion, suggestive of a localised neoplastic lesion; b) A lobulated reddish mass involving the lower eyelid with more prominent protrusion, indicating a likely malignant eyelid tumour requiring histopathological confirmation.

The MRI revealed a well-defined soft tissue lesion involving the left upper and lower eyelids, with features suggestive of a neoplastic aetiology, most likely Basal Cell Carcinoma (BCC) or Squamous Cell Carcinoma (SCC). In view of the progressive increase in size and radiological suspicion of malignancy, complete surgical excision of the lesion with adequate safety margins was recommended where Mohs micrographic surgery was undertaken.

Both eyelid lesions were surgically excised as part of the planned management strategy for this case. In this instance, the degree of eyelid involvement determined the surgical course of treatment. Mohs micrographic surgery was taken into consideration because it preserves the greatest amount of healthy tissue while enabling real-time microscopic evaluation of operative margins. To guarantee total cancer removal, Wide Local Excision (WLE) with a 5-6 mm safety margin was used instead. To rule out pagetoid spread within the conjunctiva, conjunctival map biopsies were performed.

To maintain adjacent structures and provide sufficient safety margins, each mass was carefully dissected and removed in toto. Excised specimens showed intact skin covering grey-brown nodular tumours upon gross inspection. The lesion from the upper eyelid measured 1.0×0.5×0.3 cm, while the mass from the lower eyelid was 1.0×0.5×0.5 cm. Both were sent separately for histological analysis.

The nodules' cut surfaces were hard and consistent, with no discernible cystic elements [Table/Fig-2]. In order to guarantee total tumour removal and reduce the possibility of residual disease, surgical margins were carefully evaluated intraoperatively and then verified histologically. Specimens were labelled based on their anatomical locations and prepared for microscopic analysis, which served as the foundation for a conclusive diagnosis and directed subsequent treatment planning.

Topical chemotherapy (mitomycin C) was taken into consideration for ocular surface involvement, and adjunctive cryotherapy was used to lower the probability of persistent microscopic illness in the event of conjunctival involvement. After the cancer was removed, the proper reconstructive treatments were performed using the Hughes flap and tarsoconjunctival grafts to restore the function of the eyelids as well as their aesthetic look.

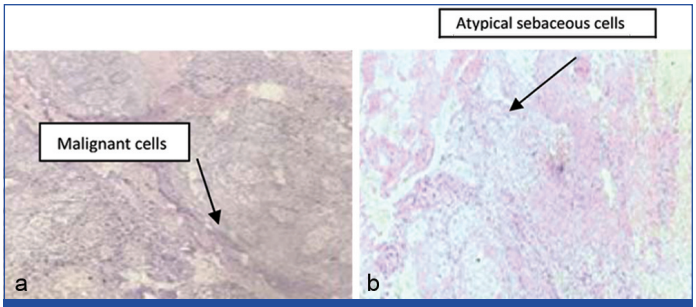
[Table/Fig-2]: Gross appearance of ocular sebaceous carcinoma of eyelid.

Microscopic analysis showed a malignant epithelial tumour that had infiltrated the dermis and was organised as irregular lobules, nests, and wide ribbons. Sebaceous differentiation was indicated by the tumour cells' large nucleoli, hyperchromasia, significant nuclear pleomorphism, and moderate to abundant pale or vacuolated cytoplasm. The occurrence of central comedo-type necrosis inside tumour lobules, a distinctive feature of Sebaceous Gland Carcinoma (SGC), was a notable and diagnostically significant observation. Cells in a number of foci had lipid-content-consistent foamy cytoplasm. With bulbous downward expansion of rete ridges and hyperplastic and dysplastic alterations, the overlaying epidermis suggested pagetoid or intraepithelial dissemination, a characteristic commonly linked to SGC. Keratinisation and localised squamous pearl formation were observed however they were few and did not constitute the predominant pattern. There were no noticeable intercellular bridges or generalised keratinisation, in contrast to SCC. Furthermore, there were no stromal retraction clefts or homogeneous basaloid cells with peripheral palisading, which are characteristics of BCC. Comedonecrosis, cytoplasmic vacuolisation, lobular architecture, and pagetoid spread evidence all helped to confirm the diagnosis of sebaceous gland cancer and successfully differentiate it from SCC and BCC.

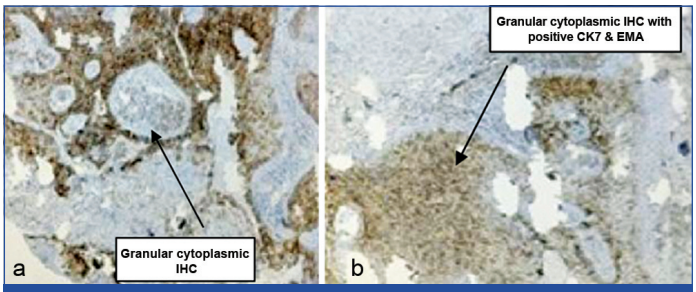
Based on these findings, the tumour exhibited growth patterns classified as trabecular, lobular, papillary, and BCC-like, with cell types including basaloid, basosquamous, and epidermoid. The tumour was graded according to 7th edition of Tumor, Node, Metastasis (TNM) classification [Table/Fig-3a,b]. As is typical of sebaceous carcinoma; there were tumour islands made of peripheral basaloid immature cells. Squamous epithelial (keratin) pearl development with regions of keratinisation was seen inside these islands, indicating localised squamous differentiation. Comedonecrosis areas were also seen, suggesting core necrosis in tumour nests. All of these results point to the diverse cytologic architecture frequently observed in sebaceous carcinoma and corroborate the diagnosis.

Immunohistochemical analysis confirmed the diagnosis. The tumour cells showed strong positivity for CK 7 and EMA [Table/Fig-4a,b]. These markers are specific for sebaceous carcinoma and were critical in distinguishing the lesion from other neoplastic conditions such as BCC or SCC.

Following surgery, the patient was monitored for 1st visit after a month and 2nd visit at two months. Eyelid function was adequately maintained, and wound healing was good with no side effects including infection, haematoma, or wound dehiscence. The surgical margins were verified to be tumour-free. In order to restore aesthetic appearance, prosthesis maintenance was started three months after the surgery site had fully healed and the margins had stabilised. Since there was no sign of nodal or distant dissemination



[Table/Fig-3]: a) Photomicrograph showing lobules of malignant epithelial cells with central comedo-type necrosis and areas of sebaceous differentiation, consistent with Sebaceous Gland Carcinoma (SGC). Haematoxylin and Eosin (H&E) with 40× magnification; b) Photomicrograph demonstrating infiltrative lobules and nests of atypical sebaceous cells with central comedo-type necrosis and areas of cytoplasmic vacuolisation, consistent with Sebaceous Gland Carcinoma (SGC). (Haematoxylin and Eosin (H&E) with 40× magnification).



[Table/Fig-4]: Photomicrographs: (a) 200×; and (b) 400× showing strong granular cytoplasmic immunopositivity on IHC with adipophilin, confirming sebaceous differentiation within tumour lobules. The tumour cells also demonstrate positivity for CK7 and Epithelial Membrane Antigen (EMA), further supporting the diagnosis of SGC.

and full excision with tumour-free margins, no adjuvant modalities like chemotherapy or radiation were necessary in this instance. To keep an eye out for any indications of recurrence, routine clinical follow-up was recommended.

DISCUSSION

Sebaceous carcinoma arises from cutaneous sebaceous glands, including the glands of Zeis and Meibomian glands [1]. It has been linked to syndromes like Muir-Torre syndrome, a kind of hereditary non polyposis colorectal cancer [2,3], as well as is more commonly described in Asian populations. It may also seldom appear after radiation therapy for retinoblastoma [4]. Clinically, BCC and SCC continue to be more prevalent, although SGC, which accounts for around 5% of eyelid malignancies, is uncommon but aggressive [5-9]. Early identification and effective treatment are essential because of its high-risk of metastasis and local recurrence [10]. Neither a syndromic relationship nor a history of radiation exposure was found in this instance.

The SGC is widely known for its "masquerade syndrome," which often causes a delayed diagnosis by imitating benign or inflammatory illnesses [11]. Clinically, it might manifest as a widespread unilateral thickening of the eyelids that resembles chronic blepharitis or chalazion, or as a painless, hard, yellowish subcutaneous lump [12,13]. Numerous reports of underlying sebaceous carcinoma in persistent or recurring chalazion-like lesions highlight the necessity of biopsy in atypical or non resolving patients [14-17]. Before histological confirmation revealed cancer, the following benign differentials were taken into consideration in this case: chalazion/pseudo chalazion, persistent blepharoconjunctivitis, sebaceous hyperplasia/adenoma, keratoacanthoma/papilloma, actinic keratosis, xanthelasma, and nevus.

Particularly for large or clinically ambiguous lesions, imaging can be helpful in determining the size of the tumour; in this instance, MRI indicated a neoplastic aetiology, which aided in surgical planning [10]. For diagnosis, histopathology is still the gold standard. Recent research emphasises the significance of genetic and

immunohistochemical markers in SGC, showing that aggressive behaviour and the propensity for metastasis are correlated with high Ki-67 proliferation index and frequent p53 mutations [18-21]. Increased tumour aggressiveness has also been connected to other molecular changes such ZEB2/SIP1 and BAG3 expression [22,23]. Although no particular genetic or syndromic connections were found, immunohistochemistry in this instance showed CK7 and EMA positivity, supporting the diagnosis of ocular sebaceous cancer.

CONCLUSION(S)

With a high incidence of distant metastases, regional lymph node dissemination, and local recurrence, ocular sebaceous carcinoma is an aggressive periocular cancer that usually affects people between the ages of 60 and 80. Because it commonly mimics benign illnesses like chalazion or chronic blepharitis, diagnosis is usually delayed. Complete surgical excision with histologically verified tumour-free margins, ideally with margin-controlled procedures like Mohs surgery, remains the cornerstone of therapy. Exenteration may be necessary in situations that are advanced and entail orbital involvement. Early diagnosis of metastasis or recurrence requires long-term surveillance with frequent clinical exams and imaging as necessary.

REFERENCES

[1] Rao NA, Hidayat AA, McLean IW, Zimmerman LE. Sebaceous carcinomas of the ocular adnexa: A clinicopathologic study of 104 cases, with five-year follow-up data. Hum Pathol. 1982;13(2):113-22. Doi: 10.1016/s0046-8177(82)80115-9.

[2] Wu A, Rajak SN, Chiang CJ, Lee WC, Huilgol SC, Selva D. Epidemiology of cutaneous sebaceous carcinoma. Australas J Dermatol. 2021;62(1):57-59. Doi: 10.1111/ajd.13387. Epub 2020 Jul 6.

[3] John AM, Schwartz RA. Muir-Torre syndrome (MTS): An update and approach to diagnosis and management. J Am Acad Dermatol. 2016;74(3):558-66. Doi: 10.1016/j.jaad.2015.09.074.

[4] Kaliki S, Ayyar A, Dave TV, Ali MJ, Mishra DK, Naik MN. Sebaceous gland carcinoma of the eyelid: Clinicopathological features and outcome in Asian Indians. Eye (Lond). 2015;29(7):958-63. Doi: 10.1038/eye.2015.79. Epub 2015 May 22.

[5] Shields JA, Demirci H, Marr BP, Eagle RC Jr, Shields CL. Sebaceous carcinoma of the ocular region: A review. Surv Ophthalmol. 2005;50(2):103-22. Doi: 10.1016/j.survophthal.2004.12.008.

[6] Sa HS, Rubin ML, Xu S, Ning J, Tetzlaff M, Sagiv O, et al. Prognostic factors for local recurrence, metastasis and survival for sebaceous carcinoma of the eyelid: Observations in 100 patients. Br J Ophthalmol. 2019;103(7):980-84. Doi: 10.1136/bjophthalmol-2018-312635.

[7] Nerad JA, Whitaker DC. Periocular basal cell carcinoma in adults 35 years of age and younger. Am J Ophthalmol. 1988;106(6):723-29. Doi: 10.1016/0002-9394(88)90708-8.

[8] Mehta M, Fay A. Squamous cell carcinoma of the eyelid and conjunctiva. Int Ophthalmol Clin. 2009;49(1):111-21. Doi: 10.1097/IIO.0b013e3181928fb9.

[9] Ghosh SK, Bandyopadhyay D, Gupta S, Chatterjee G, Ghosh A. Rapidly growing extraocular sebaceous carcinoma occurring during pregnancy: A case report. Dermatol Online J. 2008;14(8):8.

[10] Ishiguro Y, Homma S, Yoshida T, Ohno Y, Ichikawa N, Kawamura H, et al. Usefulness of PET/CT for early detection of internal malignancies in patients with Muir-Torre syndrome: Report of two cases. Surg Case Rep. 2017;3(1):71. Doi: 10.1186/s40792-017-0346-7.

[11] Shields CL, Shields JA. Tumors of the conjunctiva and cornea. Indian J Ophthalmol. 2019;67(12):1930-48. Doi: 10.4103/ijo.IJO_2040_19.

[12] Jakobiec FA, To K. Sebaceous tumor of the ocular adnexa. In: Albert DM, Jakobiec FA, editors. Principle and Practice of Ophthalmology. 2nd ed., Vol. 4. Philadelphia, PA, WB Saunders; 2000. p. 3400-1. 13.

[13] Lee SC, Roth LM. Sebaceous carcinoma of the eyelid with Pagetoid involvement of the bulbar and palpebral conjunctiva. J Cutan Pathol. 1977;4(3):134-45. Doi: 10.1111/j.1600-0560.1977.tb00899.x.

[14] Sahu SK, Sen S, Poddar C. Sebaceous gland carcinoma of lid: Masquerading as a Recurring Chalazion. Int J Appl Basic Med Res. 2021;11(2):117-19. Doi: 10.4103/ijabmr.IJABMR_652_20.

[15] Van Auken T, Reese E, Nguyen M, Fletcher R, Collias P, Webb D. A clinical case of a right eyelid multilobulated lesion: Invasive sebaceous carcinoma masquerading as Chalazion. Marshall J Med. 2024;10(4). Doi: https://doi.org/10.33470/2379-9536.1447.

[16] Sebaceous Carcinoma of the eyelid: A case report and review of the literature. EJMED [Internet]. 2022;4(6):18-21. https://www.ej-med.org/index.php/ejmed/article/view/1506.

[17] Smiri M, Khoudrani MA, Mansouri A, EL Sanharawi M. Sebaceous carcinoma of the eyelid; a pseudochalazion entity: A case report and review of the literature. Asian J Res Rep Ophthalmol. 2024;7(1):129-33. https://journalajrrop.com/index.php/AJRROP/article/view/109.

[18] Slutsky JB, Jones EC. Periocular cutaneous malignancies: A review of the literature. Dermatol Surg. 2012;38(4):552-69. Doi: 10.1111/j.1524-4725.2012.02367.x.

[19] Burns SJ, Foss AJ, Butler TK. Outcome of periocular sebaceous gland carcinoma. Ophthalmic Plast Reconstr Surg. 2005;21(5):353-55. Doi: 10.1097/01.iop.0000176273.32152.70.

[20] Cabral ES, Auerbach A, Killian JK, Barrett TL, Cassarino DS. Distinction of benign sebaceous proliferations from sebaceous carcinomas by immunohistochemistry. Am J Dermatopathol. 2006;28(6):465-71. Doi: 10.1097/01.dad.0000245200.65600.a4.

[21] Ohara M, Sotozono C, Tsuchihashi Y, Kinoshita S. Ki-67 labeling index as a marker of malignancy in ocular surface neoplasms. Jpn J Ophthalmol. 2004;48(6):524-29. Doi: 10.1007/s10384-004-0129-0.

[22] Mulay K, Shah SJ, Aggarwal E, White VA, Honavar SG. Periocular sebaceous gland carcinoma: Do androgen receptor (NR3C4) and nuclear survivin (BIRC5) have a prognostic significance? Acta Ophthalmol. 2014;92(8):e681-e687. Doi: 10.1111/aos.12466.

[23] Bhardwaj M, Sen S, Sharma A, Kashyap S, Chosdol K, Pushker N, Bajaj MS, Bakhshi S. ZEB2/SIP1 as novel prognostic indicator in eyelid sebaceous gland carcinoma. Hum Pathol. 2015;46(10):1437-42. Doi: 10.1016/j.humpath.2015.05.026.

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