

Case Report

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Primary Cutaneous Mucinous Carcinoma of the Eyelid: A Case Report

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ABSTRACT

Primary mucinous carcinoma of the skin is a rare cutaneous carcinoma arising from the eccrine differentiated sweat glands. The most frequent location is the eyelid, followed by the scalp and face. We reported a case in a 31-year-old male with a left eyelid mass. In this case, we widely discuss Primary cutaneous carcinoma's clinical and histopathological features and literature review.

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Introduction

Primary mucinous carcinoma is a rare adenocarcinoma of the skin [1,2]. These tumors have a higher male predominance and occur more frequently in the elderly [1-3]. It commonly arises from the head and neck region, most commonly found in the eyelid. The clinical appearance can present as a slow-growing solitary, painless, flesh-colored nodular lesion ranging from 2mm to 12cm in size or an ulcerated lesion with a smooth, crusted surface [1-3]. This report presents a case of primary cutaneous mucinous carcinoma of the eyelid in a 31-year-old male.

Case Report

A 31-year-old male presented to the ophthalmology outpatient clinic with a left eyelid mass. The patient first noticed a small bump along his left eyelid 10 months before presentation, which has been progressively increasing. He reported no pain, bleeding, ulceration, or visual disturbance. On examination, a 2mm x 2mm hemispherical mass was noted along the left upper eyelid, with an irregular surface and normal skin color. An incisional biopsy showed a mucinous eccrine carcinoma, which was strongly positive for CK 7 and negative for CK 20. The patient was booked for a left-wide local excision of the left eyelid mass with a frozen section and eyelid reconstruction under general anesthesia, which was done on the 27th of January, 2022. On gross examination of the specimen, an upper eyelid was received with eyelashes attached measuring 1cm x 0.7cm x 0.4cm. Noted along the anterior aspect of the specimen along the eyelashes is a 0.4cm nodular lesion noted to be 0.4cm away from the closest resection margin. The resection margins were submitted enface for the frozen section, which on examination were uninvolved by malignancy. The histological findings showed a dermal tumor composed of epithelial cell islands surrounded by lakes of extracellular mucin. The surgical margins were free of tumor.

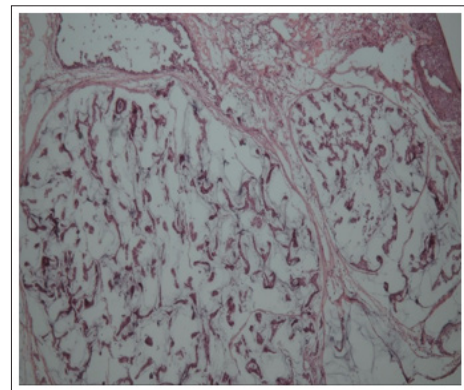


Figure 1: H&E x100: tumor cells arranged in epithelial cell islands surrounded by lakes of extracellular mucin

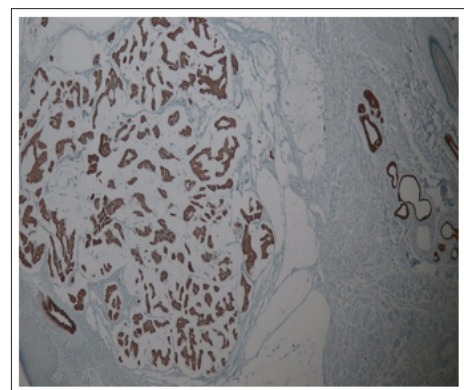


Figure 2: Immunohistochemical findings of tumor cells exhibiting positive staining for CK 7 positive.

Discussion

Primary cutaneous mucinous carcinoma is a rare adenocarcinoma of the skin for which there is controversy regarding whether it arises from the eccrine sweat gland or the apocrine gland [1, 2, 4]. There is difficulty in distinguishing this primary neoplasm from metastatic mucinous carcinoma of non-cutaneous origin with primary sites in the lungs, breast, colon, and ovaries [5,6]. These tumors have a higher male predominance and occur more frequently in the elderly [1,3,7]. It commonly arises from the head and neck region, mostly found in the eyelid (38%), but also occurs on the face (20.3%) and scalp (16%) [1,3]. It is also known to have locally aggressive features and a high recurrence rate [7].

The clinical appearance can present as a slow-growing solitary, painless, flesh-colored nodular lesion ranging from 2mm to 12cm in size or an ulcerated lesion with a smooth, crusted surface (1, 2, 3). The lesion on which this case report is based was a 4mm nodular lesion located within the left upper eyelid. The clinical diagnosis can include benign lesions such as lipoma, neuroma, and cutaneous cysts and malignant tumors such as basal cell carcinoma, sebaceous carcinoma, melanoma, and metastatic carcinoma (1, 3). Histology of the primary cutaneous mucinous carcinoma is quite distinct; its characteristic features include large pools of extracellular basophilic mucin-containing tumor cells (1, 3) with focal tubule formation indicating eccrine differentiation (3). However, its definitive diagnosis requires the exclusion of metastatic visceral malignancy (1, 3, 7); this is due to the majority of mucinous carcinoma of the skin being metastatic (4, 7). The common metastatic sites of origin include the gastrointestinal tract and other sites such as the breast, salivary glands, lacrimal glands, nose and paranasal sinuses, bronchi, renal pelvis, and ovary (4). It is also important to differentiate metastatic mucinous adenocarcinoma (1, 3, 7); this can be done via a thorough clinical and imaging assessment (4). Primary cutaneous mucinous carcinoma is CK-7 positive and CK-20 negative, unlike metastases of the gastrointestinal tract, which are CK-20 positive and CK-7 negative. (5). Surgery is the treatment of choice (3) with wide local excision with at least a 5mm margin is preferred (1, 2, 3). The tumor is also resistant to chemotherapy and radiotherapy (1, 3, 5). The local recurrence rate varies from 0-33%. Metastasis to regional lymph nodes is 10%, with distant metastasis in 3% of cases (3). In the literature, the recurrence rate is attributed to incomplete excision of the tumor. For recurrent cases and sites such as the eyelid, Moh's micrographic surgery is preferred as this allows for the complete removal of the tumor along with margins and preserves tissue, bronchi, renal pelvis, and ovary (6). It is also important to differentiate metastatic mucinous adenocarcinoma (1, 3, 8); this can be done via a thorough clinical and imaging assessment (4). Primary cutaneous mucinous carcinoma is CK-7 positive and CK-20 negative, unlike metastases of the gastrointestinal tract, which are CK-20 positive and CK-7 negative. (5) Surgery is the treatment of choice (3) with wide local excision with at least a 5mm margin is preferred (1, 2, 3). The tumor is also resistant to chemotherapy and radiotherapy (1, 3, 5). The local recurrence rate varies from 0-33%. Metastasis to regional lymph nodes is 10%, with distant metastasis in 3% of cases (3). In the literature, the recurrence rate is attributed to incomplete excision of the tumor. For recurrent cases and sites such as the eyelid, Moh's micrographic surgery is preferred as this allows for the complete removal of the tumor along with margins and preserves tissue (3, 9).

Conclusion

Primary cutaneous mucinous carcinoma is a rare adenocarcinoma of the skin for which there is a higher male predominance and

occurs more frequently in the elderly. Its definitive diagnosis requires the exclusion of metastatic visceral malignancy, and it is important to differentiate it from metastatic mucinous adenocarcinoma. The tumor is resistant to chemotherapy and radiotherapy with surgical intervention via wide local excision, with at least a 5mm margin being the preferred treatment. The case within this report had a wide local excision with a frozen margin section, which was uninvolved by malignancy.

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