Unusual presentation of extra-ocular sebaceous carcinoma mimicking squamous cell carcinoma

Case Report

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ABSTRACT

Introduction: Sebaceous carcinomas (SC) are rare and aggressive malignancies. Accounting for approximately 0.2–4.6% of all skin cancers, they are considered uncommon. With its diverse clinical presentation, SC frequently resembles other types of skin tumors, posing diagnostic challenges, and immunohistological studies are essential for achieving a definitive diagnosis. **Case report:** A 54-year-old female patient, was referred for the management of multiple facial lesions. Clinical examination revealed on the upper right lip an erythematous plaque, confirmed by skin biopsy as a squamous cell carcinoma. The right pasal wing had an ill-defined oval-shared erythematous-crufty plaque, with polarized dermoscopy showing the presence of

nasal wing had an ill-defined oval-shaped erythematous-crusty plaque, with polarized dermoscopy showing the presence of chrysalides, erosions, keratin plugs, glomerular and linear vessels surrounded by a whitish halo, suggesting a keratinizing tumor such as squamous cell carcinoma. But histological examination and immunohistochemistry confirmed the diagnosis of sebaceous carcinoma.

Discussion: Sebaceous carcinoma often resembles inflammatory diseases or other tumor types in both clinical and histological aspects, presenting an ongoing challenge for clinicians, surgeons, and pathologists in terms of early detection, accurate diagnosis, and appropriate treatment.

Our case presents a unique manifestation of sebaceous carcinoma, initially clinically appearing as a plaque and also dermoscopically mimicking a squamous cell carcinoma by displaying a dermoscopic pattern reminiscent of a keratinizing tumor. The diagnosis was confirmed through histological examination complemented by immunohistochemistry using strongly positive androgen receptors. The second distinctive aspect is the juxtaposition of both squamous cell carcinoma and sebaceous carcinoma, leading to their excision as a single unit with 6 mm margins, as recommended.

Key Words: Sebaceous carcinomas, squamous cell carcinoma, androgen receptors .

Received: 26 May 2024, Accepted: 12 March 2025.

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ISSN: 2090-097X, April 2025, Vol. 16, No. 2

INTRODUCTION

Sebaceous carcinomas (SC) are rare and aggressive malignancies that arise from the adnexal epithelium of sebaceous glands. Accounting for approximately 0.2–4.6% of all skin cancers, they are considered uncommon ^[1]. Ocular SC originates from the Meibomian and Zeiss glands of the eyelids, while extraocular SC, although exceedingly rare, arise from cutaneous sebaceous glands. These tumors typically develop on the head and neck, with a particular predilection for the periocular area ^[2]. With its diverse clinical presentation, SC frequently resembles other types of skin tumors, posing diagnostic challenges, and immunohistological studies are essential for achieving a definitive diagnosis.

In this report, we present the case of a patient with sebaceous carcinoma clinically resembling a squamous cell carcinoma.

CASE REPORT:

A 54-year-old female patient, phototype III with no particular medical history, was referred by dermatologists for the management of multiple facial lesions of chronic evolution. Clinical examination revealed multiple roughsurfaced plaques suggestive of actinic keratoses, confirmed by dermoscopy data. On the upper right lip, there was an erythematous plaque with an eroded center covered with hemorrhagic crusts, confirmed by skin biopsy as a well-differentiated mature and infiltrating squamous cell carcinoma.

The right nasal wing had an ill-defined oval-shaped erythematous-crusty plaque measuring 2cm in diameter, with polarized dermoscopy showing the presence of chrysalides, erosions, keratin plugs, glomerular and linear vessels surrounded by a whitish halo, primarily suggesting a keratinizing tumor such as squamous cell carcinoma (figure 1).



Figure 1: A- polarized dermoscopy showing the presence of chrysalides, erosions, keratin plugs, glomerular and linear vessels surrounded by a whitish halo, primarily suggesting a keratinizing tumor, B- An ill-defined ovalshaped erythematous-crusty plaque of the right nasal wing.

We completed by a biopsy followed by histological examination to decide on the diagnosis, and it revealed a tumor proliferation consisting of masses and trabeculae with peripheral basophilic cells, sometimes palisading, and centrally clearer cells with enlarged nuclei and heterogeneous chromatin (figure 2).



Figure 2: Histological examination showed a tumor proliferation consisting of masses and trabeculae with peripheral basophilic cells, sometimes palisading, and centrally clearer cells with enlarged nuclei and heterogeneous chromatin.

Strong and diffuse expression of androgen receptors on immunohistochemistry confirmed the diagnosis of sebaceous carcinoma.



Figure 3: The patient underwent excision of the two tumors on the right nasal and upper lip areas in one piece with 6 mm margins and covered with a skin graft.

Histological examination of the excised specimen confirmed the diagnosis of sebaceous carcinoma with clear histological margins. The postoperative course was marked by necrosis of the skin graft (figure 4),



Figure 4: Image showing the necrosis of the skin graft.

and a kite flap was applied ensuring acceptable reconstruction of the white lip (figure 5). Close follow-up during the first year to date has not revealed any relapse.



Figure 5: Image showing the reconstruction of the white lip with a kite flap.

DISCUSSION

SC is an uncommon malignant tumor of the skin, representing 0.2–4.6% of all malignant cutaneous tumors, with an incidence of 0.06 per 100,000 cases per year. It typically occurs in adults, with a slight male predominance and a higher incidence in elderly patients ^[3,4]. Extraocular SC tends to occur most frequently on the head and neck, followed by other areas like the trunk, salivary glands, genitalia, breast, ear canal, and mouth ^[5,6].

It is distinguished by its propensity for local recurrence and distant metastasis, with rates of 29% and 21%, respectively ^[7]. SC can manifest sporadically or in conjunction with Muir-Torre syndrome, an autosomal dominant condition related to hereditary non-polyposis colorectal cancer syndrome. MTS is frequently linked to various malignancies of the intestinal and urinary tracts, along with skin tumors like keratoacanthomas and sebaceous neoplasms ^[8]. SC presentation is nonspecific, with the most commonly reported clinical aspect being that of a nodule or tumor, which can mimic other tumors, notably a basal cell carcinoma, squamous cell carcinoma, other adnexal tumors, amelanotic melanoma, Merkel cell carcinoma, and cutaneous lymphoma, or non-neoplastic benign sebaceous conditions such as nevus sebaceus, xanthoma, and sarcoidosis, resulting in delays in diagnosis, inappropriate treatment, heightened morbidity, and mortality ^[7,10].

The most commonly described dermoscopic features in the literature are: a predominantly pink-whitish and yellowish background, yellow clods and globules, and ulceration; blue ovoid nests and bluish structureless areas in the pigmented form, and a vascular pattern often characterized as polymorphous or linear irregular and crown-shaped ^[11].

In histopathology, irregular and asymmetric sebaceous lobules are commonly observed within the dermis. Malignant cells exhibit marked pleomorphism, hyperchromatism, increased mitotic activity, and nuclear atypia. Sebaceous carcinoma can be categorized into three groups based on the extent of differentiation: well-differentiated, moderately, or poorly differentiated. Sebaceous carcinomas are classified into four histopathological types: papillary, lobular, comedocarcinoma, and mixed ^[12].

Immunostaining, utilizing markers such as BerEP4, ADP, EMA, p53, Ki-67, and adipophilin for cytoplasmic lipids, proves valuable in diagnosing SC and distinguishing it from SCC and BCC. Recently, staining for the androgen receptor has emerged as the most useful marker for positive SC diagnosis ^[13].

The standard treatment for SC typically involves surgical resection with wide local excision (WLE), although Mohs micrographic surgery (MMS) is also utilized and may offer lower recurrence rates and better tissue preservation. Recommended surgical margins are typically 5–6 mm for WLE and 2 mm for MMS, both of which have demonstrated effectiveness ^[14].

Our case presents a unique manifestation of sebaceous carcinoma, initially clinically appearing as a plaque and also dermoscopically mimicking a squamous cell carcinoma by displaying a dermoscopic pattern reminiscent of a keratinizing tumor. The diagnosis was confirmed through histological examination complemented by immunohistochemistry using strongly positive androgen receptors. The second distinctive aspect is the juxtaposition of both squamous cell carcinoma and sebaceous carcinoma, leading to their excision as a single unit with 6 mm margins, as recommended.

CONCLUSION:

Sebaceous carcinoma often resembles inflammatory diseases or other tumor types in both clinical and histological aspects, presenting an ongoing challenge for clinicians, surgeons, and pathologists in terms of early detection, accurate diagnosis, and appropriate treatment. Given its aggressive behavior and high likelihood of recurrence, metastasis, and potential development of visceral malignancies, long-term follow-up of these cases is crucial.

CONFLICT OF INTEREST

the authors declare that there are no conflict of interest.

Funding acknowledgement:

The authors declare that no funding was received.

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