

Successful Treatment of Sebaceous Carcinoma on the Scalp Using Mohs Micrographic Surgery: A Case Report

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Abstract

An atypical variant of cutaneous oncology: sebaceous carcinomas are rare and aggressive malignancy that originates from sebaceous glands, commonly found in the periocular region. While sebaceous carcinomas are a rare pathology in the periocular region these carcinomas can also present in extra periocular areas such as the scalp, and are less frequently reported. This case reports a 65-year old woman with a sebaceous carcinoma on the scalp successfully treated with Mohs micrographic surgery (MMS). The case highlights the clinical presentation, diagnosis, treatment, and postoperative management, emphasizing the importance of MMS in ensuring clear margins and minimizing recurrence.

1. INTRODUCTION

Sebaceous carcinoma is a rare and aggressive skin cancer, of which typically arises from sebaceous glands [1]. These pathologies can occur anywhere on the body in which sebaceous glands are found, but are commonly found in the periocular region [1]. Extra-periocular sebaceous carcinoma, such as with this case report, are less common [1]. Extra-periocular lesions can present on the scalp, and are less common and may present diagnostic and therapeutic challenges [1]. MMS is a tissue sparing technique that can provide high cure rates by ensuring complete removal of the tumor, while also maintaining the healthy surrounding tissue [2]. As such MMS is

an excellent choice for such pathologies that exist in cosmetically sensitive areas such as the scalp [2]. This case report details the presentation, diagnosis, and successful treatment of sebaceous carcinoma on the scalp of a 65-year-old woman using MMS.

2. CASE PRESENTATION

A 65-year-old woman presented with a 1.5 cm erythematous, firm nodule on the right parietal region of the scalp. The lesion had been present for approximately six months and had shown gradual growth. On physical examination, the lesion was non-tender, firm, and immobile (Figure 1).



Figure 1. *Sebaceous Carcinoma of the Scalp*

A biopsy of the lesion revealed atypical sebaceous cells with basaloid features and vacuolated cytoplasm, consistent with sebaceous carcinoma.

The patient underwent MMS for definitive treatment. Postoperative care included primary closure of the surgical defect, and the patient was advised to keep the area clean and dry, with the application of a topical antibiotic ointment for one week. The final histopathological examination confirmed complete resection of the sebaceous carcinoma with clear margins. The patient was monitored regularly for signs of recurrence, and at the six-month follow-up, there was no evidence of recurrence or metastasis. The surgical site had healed well, and the patient reported no complications.

3. DISCUSSION

Sebaceous Carcinoma is a rare and potentially aggressive cutaneous malignancy, of which arises from sebaceous glands [3]. Such malignancy accounts for approximately less than 1% of all skin cancers [4]. While most commonly occurring in the periocular region, extra-ocular manifestations such as the scalp are uncommon [4]. Sebaceous carcinomas on the scalp provide a diagnostic and therapeutic challenge [4]. Given

the nonspecific clinical appearance, which mimics benign lesions like sebaceous hyperplasia, epidermal inclusion cyst, or basal cell carcinoma [5]. As such delay in diagnosis can occur, which can contribute to local invasion and increased risk for regional and distant metastasis [5]. Histological examination is the gold standard for diagnosis, with features of the lesion including lobular proliferation of atypical sebocytes, nuclear pleomorphism, and mitotic figures [6]. Immunohistochemical staining, such as positivity for epithelial membrane antigen (EMA) may aid in the confirmation of the diagnosis, especially in difficult cases [6].

For optimal prognosis, early and complete removal of the lesion provides better outcomes and less recurrences [7]. Sebaceous carcinomas have a high recurrence rate and a metastatic potential especially when diagnosis or treatment is delayed [7]. MMS provides a means of providing advantage over excision by enabling the surgeon to maintain complete margin control, reducing recurrence rates while maintaining healthy tissue [2].

MMS facilitates a precise removal of the tumor with a tissue sparing technique which is a key consideration in a cosmetically sensitive area such as the scalp [2]. Sebaceous carcinomas can

also be associated with Muir-Torre syndrome, a rare condition associated with sebaceous neoplasms and visceral malignancies [8]. Although in this case the patient did not have such a syndrome it is important to note for proper evaluation and management, including a genetic and gastroenterological evaluation.

This report overall adds to the limited collection of literature on sebaceous carcinomas on the scalp and supports the treatment methodology of MMS as the preferred surgical modality in managing complex cutaneous malignancies.

4. CONCLUSION

Mohs micrographic surgery is a valuable technique for the treatment of sebaceous carcinoma, providing high cure rates and minimizing tissue loss. This case report underscores the importance of early diagnosis and appropriate surgical intervention in managing sebaceous carcinoma on the scalp.

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