



International Journal of Scientific Research in Dental and Medical Sciences

www.ijsrdms.com



Sebaceous Carcinoma with Widespread Metastases: A Case Report

Ningthoujam Dinita Devi ^{a,*}, Rahul Mahawar ^a, Sarmila Longjam ^a, Laishram Jaichand Singh ^a,
Haobijam Persy ^b

^a Department of Radiation Oncology, Regional Institute of Medical Sciences, Manipur, India

^b Department of Pathology, Regional Institute of Medical Sciences, Manipur, India

ARTICLE INFO

Article history:

Received 08 April 2024

Received in revised form 11 May 2024

Accepted 15 May 2024

Available online 24 May 2024

Keywords:

Carcinoma

Radiotherapy

Survival

ABSTRACT

Sebaceous carcinoma (SC) is an infrequently encountered skin malignancy noted for its aggressive nature. We report here a 78-year-old male who presented to the Department of Radiation Oncology at RIMS Imphal with a two-month history of painless ulcerated swellings on the scalp, right ring finger, right big toe, and upper back, each measuring approximately 2x2cm² with erythematous discoloration, hard, tender and adherent to the underlying structures. The histopathological study confirmed the lesion as sebaceous carcinoma. Palliative radiotherapy was administered. The patient responded favorably to the prescribed treatment regimen, resulting in a substantial 50% reduction in tumor size.

Consequently, regular follow-up monitoring was strongly recommended to ensure continued progress and optimal patient condition management. Early detection of this tumor is imperative for improved prognosis and outcomes. Despite this, the prognosis remains poor due to the high local recurrence rates and distant metastasis.

1. Introduction

Sebaceous carcinoma (SC) represents a seldom encountered malignancy of the skin, characterized by its aggressive behavior. Predominantly observed in the periocular region, head, and neck, this neoplasm can manifest in any location harboring sebaceous glands.^[1] The incidence of extraocular sebaceous carcinoma remains infrequent, primarily affecting the head and neck regions of older individuals.^[2] Clinical presentation often includes erythematous, ulcerated nodules and plaques. Sebaceous carcinoma primarily affects the elderly, with an estimated mean age of diagnosis ranging from 63 to 77 years.^[3] The incidence of sebaceous cell carcinoma is significantly higher in Asia and the Indian subcontinent compared to other regions of the world.^[4] Prior radiation exposure, immunosuppression, and Muir-Torre syndrome are all risk factors for sebaceous carcinoma.^[5, 6] Muir-Torre syndrome, an autosomal dominantly inherited condition, represents a distinct subset of hereditary nonpolyposis colorectal cancer syndromes, exhibiting a well-established association with the development of sebaceous carcinoma, a rare cutaneous malignancy.^[7, 8] Metastatic sebaceous carcinoma is associated with a higher mortality rate and a dismal five-year survival rate.^[9] Complete excision remains the primary treatment option. The treatment of metastatic disease has not been adequately defined and may include excision, radiation therapy, and chemotherapy.

2. Case presentation

A 78-year-old male presented to the Department of Radiation Oncology at RIMS Imphal with a two-month history of ulcerated painless swellings observed on the scalp, right ring finger, right big toe, and upper back. The patient's past medical and familial histories were found to be unremarkable. Examination revealed several nodules on the scalp and upper back and ulcerated nodules on the right ring finger and big toe. Each lesion was roughly 2x2 cm². These lesions exhibited erythematous discoloration and were characterized by hardness, tenderness, and fixation to the underlying structures, as depicted in Fig. 1. No palpable lymphadenopathy was noted in the body. Figure 2 displays the patient's radiographic findings. His routine investigations were uneventful. Fine needle aspiration cytology (FNAC) of the lesions revealed the presence of small round cells with scant cytoplasm and large nuclei. The tumour in the right ring finger was biopsied, and histopathology revealed basaloid cells arranged in nodules and nests, separated by fibrovascular septa. These cells had moderate pleomorphism, prominent cytologic atypia, sparse basophilic cytoplasm, and visible nucleoli. Furthermore, many tumor nodules showed comedonecrosis, characterized by sebaceous differentiation and cytoplasmic vacuolization. Patchy epithelial membrane antigen (EMA) was positive. The histopathological findings provided conclusive evidence of sebaceous carcinoma. Radiotherapy was given as the primary mode of treatment given the patient's poor general health, advanced age, and metastatic progression of the disease. The patient underwent radiation therapy to the lesions in the right ring finger and right big

* Corresponding author. Ningthoujam Dinita Devi

E-mail address: dini.ji2019@gmail.com

Department of Radiation Oncology, Regional Institute of Medical Sciences, Manipur, India

<https://doi.org/10.30485/IJSRDMS.2024.451840.1575>



toe by Cobalt-60 teletherapy machine with adequate bolus applied over the lesion, giving a total dose of 30 Gy in 10 fractions to each site over ten days using both anterior and posterior portals. The treated lesions at the irradiated sites exhibited a favourable response to the prescribed therapeutic regimen, with a 50% reduction in tumor dimensions observed within one week following the initiation of treatment. Consequently, regular follow-up monitoring was recommended to assess the continued progression and efficacy of the treatment approach. However, he succumbed to the disease one month after treatment due to deterioration of his general condition.



Fig. 1. Multiple erythematous swelling over the scalp.



Fig. 2. Radiological examination of the right hand.

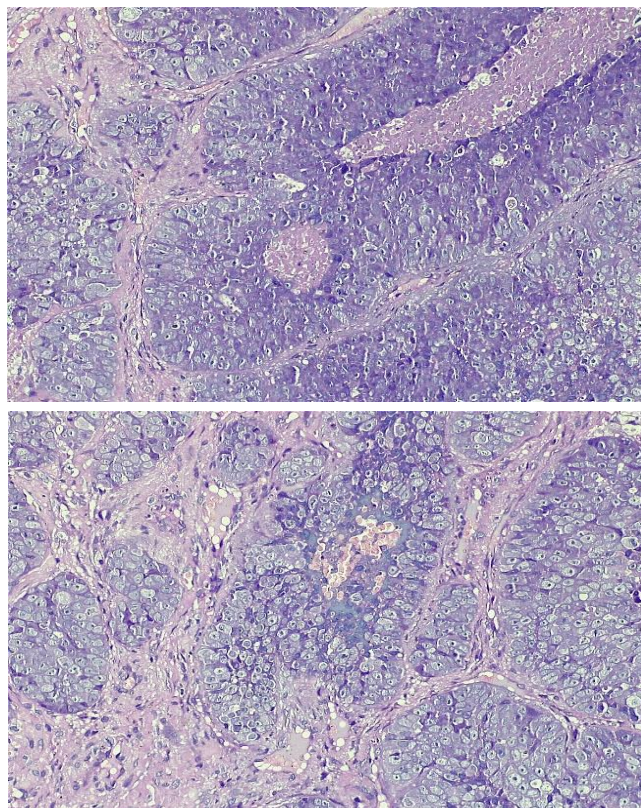


Fig. 3. Basaloid cells arranged in nodules and nest, separated by fibrovascular septa.

3. Discussion

Sebaceous carcinoma (SC) represents a rare and aggressive malignancy from the sebaceous glands. While commonly observed in the periocular region, head, and neck, its occurrence is not limited to these areas, as it can manifest anywhere in the body where sebaceous glands are present. SC exhibits aggressive behavior both locally and distantly. It is associated with a multifocal origin and can induce destruction locally, often presenting a pattern of pagetoid spread. Additionally, SC readily metastasizes distantly. Due to these characteristics, SC is classified as an aggressive disease, contributing to substantial morbidity and mortality. Its prevalence is higher among older women. Over 98% of SC cases are diagnosed in individuals aged 40 and above, with the highest incidence observed during the seventh and eighth

decades of life. Surgical intervention may not be feasible for certain patients due to advanced age or comorbidities. The optimal radiation dose for SC management remains indeterminate; however, 60 Gy or higher may be necessary to effectively control gross tumor^[9]

4. Conclusion

Sebaceous carcinoma represents a rare and aggressive tumor, posing diagnostic challenges due to its infrequency and clinical variability. Vigilance in identifying this malignancy early is crucial for optimizing outcomes and enhancing the chances of successful recovery. Given its destructive nature, challenging clinical course, and propensity for recurrence, long-term follow-up is imperative. Radiation therapy has demonstrated efficacy and safety in managing metastatic sebaceous carcinoma, offering promising prospects for prolonged survival through effective tumor control.

Conflict of Interest

The authors declared that there is no conflict of interest.

Acknowledgments

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References

- [1] Dasgupta T, Wilson LD, Yu JB. A retrospective review of 1349 cases of sebaceous carcinoma. *Cancer*. 2009;115(1):158-65. <https://doi.org/10.1002/ncr.23952>.
- [2] Tripathi R, Chen Z, Li L, Bordeaux JS. Incidence and survival of sebaceous carcinoma in the United States. *Journal of the American Academy of Dermatology*. 2016;75(6):1210-5. <https://doi.org/10.1016/j.jaad.2016.07.046>.
- [3] 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. *British Journal of Ophthalmology*. 2019;103(7):980-4. <https://doi.org/10.1136/bjophthalmol-2018-312635>.
- [4] Papadimitriou I, Vakirlis E, Sotiriou E, Bakirtzi K, Lallas A, Ioannides D. Sebaceous neoplasms. *Diagnostics*. 2023;13(10):1676. <https://doi.org/10.3390/diagnostics13101676>.
- [5] Pleitz JL, Patel AB, Spires SE, Anderson FL, Aouad RK. A mass on the nasal dorsum. *JAMA Otolaryngology–Head & Neck Surgery*. 2014;140(3):267-8.
- [6] Kyllö RL, Brady KL, Hurst EA. Sebaceous carcinoma: review of the literature. *Dermatologic Surgery*. 2015;41(1):1-15. <https://doi.org/10.1097/DSS.0000000000000152>.
- [7] Cook S, Pethick J, Kibbi N, Hollestein L, Lavelle K, de Vere Hunt I, et al. Sebaceous carcinoma epidemiology, associated malignancies and Lynch/Muir-Torre syndrome screening in England from 2008 to 2018. *Journal of the American Academy of Dermatology*. 2023;89(6):1129-35. <https://doi.org/10.1016/j.jaad.2023.03.046>.
- [8] Elston DM. Sebaceous neoplasms and the Muir-Torre syndrome. *Journal of the American Academy of Dermatology*. 2023;89(6):1123. <https://doi.org/10.1016/j.jaad.2023.05.012>.
- [9] Hata M, Koike I, Omura M, Maegawa J, Ogino I, Inoue T. Noninvasive and curative radiation therapy for sebaceous carcinoma of the eyelid. *International Journal of Radiation Oncology* Biology* Physics*. 2012;82(2):605-11. <https://doi.org/10.1016/j.ijrobp.2010.12.006>.

How to Cite this Article: Dinita Devi N, Mahawar R, Longjam S, Singh LJ, Persy H. Sebaceous Carcinoma with Widespread Metastases: A Case Report. *International Journal of Scientific Research in Dental and Medical Sciences*. 2024;6(2):91-93. <https://doi.org/10.30485/IJSRDMS.2024.451840.1575>.