

Case Report

Effective Management of Nasal Vestibule Squamous Cell Carcinoma with Cemiplimab: A Case Report

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Keywords

Cemiplimab · Squamous cell carcinoma · Immunotherapy · Skin cancer

Abstract

Nasal vestibule squamous cell carcinoma (SCC) is a rare malignancy with limited treatment options. This case report presents an 83-year-old female with SCC of the nasal vestibule who was ineligible for surgery or radiotherapy due to various factors. The patient was successfully treated with cemiplimab, a systemic anti-PD-1 antibody, resulting in a remarkable tumor reduction without any observed side effects. This is the first reported case of nasal vestibule SCC treated with cemiplimab, highlighting its potential as a promising therapeutic option.

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Published by S. Karger AG, Basel

Introduction

Malignant tumors of the sinonasal tract are infrequent, accounting for only 3% of all head and neck malignant tumors and 0.2% of all invasive carcinomas [1]. The majority of these tumors are squamous cell carcinoma (SCC), although other types such as melanoma, adenocarcinoma, salivary gland-type carcinoma, olfactory neuroblastoma, and sinonasal undifferentiated carcinoma have also been reported [2]. The CARE Checklist has been completed by the authors for this case report, attached as supplementary material (for all online suppl. material, see <https://doi.org/10.1159/000531843>).

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Case Report

We present the case of an 83-year-old female with a medical history of cigarette smoking (approximately six cigarettes per day since the age of 20), ischemic and hypertensive heart disease, and a previous stroke in 2019 without any motor function impairment. Additionally, the patient suffered from chronic obstructive pulmonary disease, osteoporosis, and arthrosis. Her current medication regimen included clopidogrel/acetylsalicylic acid, candesartan, cil-exetil, and simvastatin. During physical examination, a 2 cm ulcerative lesion with raised borders and dried blood was observed on the left nasal vestibule involving the cutaneous part of the nostril (Fig. 1a). Following a dermatological examination, an incisional punch biopsy (3 mm) was performed, confirming the presence of SCC. Following a comprehensive assessment conducted by plastic and reconstructive surgery specialists, it was determined that surgical intervention was not a viable option for the patient due to considerations such as the tumor's location, the patient's advanced age, and the presence of comorbidities. Additionally, due to the patient's overall health status, the radiation oncologist determined that radiotherapy was not a viable option. Given the contraindications to surgical therapy and radiotherapy, the patient was initiated on treatment with cemiplimab. The recommended dosage was 350 mg intravenously over 30 min every 3 weeks. After three treatment cycles, the patient exhibited an excellent response, with significant tumor reduction (Fig. 1b). The patient tolerated the therapy well without experiencing any side effects, the patient is continuing the therapy, she has currently completed 4 cycles.

Discussion

Cancer of the nasal vestibule is a rare malignancy predominantly characterized by SCC and is associated with poor survival rates. The standard treatment options for this condition include radiotherapy, surgery, or a combination of both. Previous studies have reported a 5-year disease-specific survival of 74% and an overall survival of 50% [3]. Radiation and surgery are the treatment of choice for small lesions, while larger lesions often require a combined approach [4].

A retrospective analysis by Weinberger et al. evaluated the role of surgery in the treatment of SCC of the nasal vestibule, highlighting the preference for radiation therapy for cosmetic reasons [5]. McCollough et al. conducted a study on the use of radiotherapy alone for SCC of the nasal vestibule, demonstrating effective local control and favorable cosmetic outcomes [6]. Samaha et al. reviewed 14 patients with SCC of the nasal vestibule, achieving a 78% local regional control rate in patients with early-stage disease using radiotherapy or surgery as primary treatment modalities [7].

In cases where curative surgery or radiation is not feasible, anti-PD-1 antibodies have emerged as the first-line systemic treatment for patients with metastatic or locally advanced SCC. Cemiplimab, the first approved systemic agent for advanced SCC, has shown efficacy in patients with locally advanced and metastatic disease [8]. In a pivotal phase 2 study by Migden et al. [8], the efficacy of cemiplimab was evaluated in patients with advanced cutaneous SCC. The study included expansion cohorts of patients with locally advanced or metastatic disease, as well as a specific cohort of patients with metastatic disease. Intravenous administration of cemiplimab at a dose of 3 mg per kilogram of body weight every 2 weeks resulted in a notable response rate. The expansion cohorts of the phase 1 study showed a response to cemiplimab in 13 out of 26 patients (50%; 95% confidence interval, 30–70). Similarly, in the metastatic-disease cohort of the phase 2 study, a response was observed in 28 out of 59 patients (47%; 95% confidence interval, 34–61). Notably, the duration of response



Fig 1. a A 2 cm ulcerative lesion with raised borders and dried blood on the left nasal vestibule. **b** After three cycles, the patient's tumor had an excellent response.

exceeded 6 months in 57% of the patients who responded, with 82% maintaining a response at the time of data cutoff. However, it is important to note that adverse events associated with immune checkpoint inhibitors, such as diarrhea, fatigue, nausea, constipation, and rash, were reported in this study. Nevertheless, only a small percentage of patients (7%) discontinued treatment due to adverse events [8], in line with the side effects of the main PD1/PDL1 inhibitors [9].

To the best of our knowledge, this is the first reported case of SCC involving the nasal vestibule successfully treated with cemiplimab. Surgical treatment of this type of tumor can be challenging, with potential risks of incomplete removal and high relapse rates. Moreover, surgery may increase the risk of complications such as nasolacrimal duct obstruction and mucocele formation while negatively impacting the patient's quality of life. It is worth noting that the patient tolerated the cemiplimab treatment exceptionally well, exhibiting no side effects despite her advanced age and comorbidities. Notably, no episodes of hematological toxicity were observed.

Statement of Ethics

This article was conducted ethically in accordance with the Declaration of Helsinki. Ethics approval was not required for this single case report in accordance with local/national guidelines. The patient's written informed consent to publish the case and clinical images was obtained.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Funding Sources

This research was partially supported by funding from the EUBEA Agency, Naples, Italy, which provided financial support for the publication fees of this article.

Author Contributions

Ferdinando Costabile, Marianna Donnarumma, and Giuseppe Di Lorenzo treated the patient and acquired the clinical data. Arianna Piscosquito, Concetta Ingenito, Michela Iuliucci, Carlo Buonerba, and Rossella Di Trollo wrote the article and supervised the study.

Data Availability Statement

All data generated or analyzed during this study are included in this article and its online supplementary material. Further inquiries can be directed to the corresponding author.

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