

BRIEF ARTICLE

Vismodegib as a Treatment for Multiple Non-locally Advanced Basal Cell CarcinomasRobert Frantz, MD¹, Mitchell Herold, MD², Clara Curiel-Lewandrowski, MD²¹ University of Florida College of Medicine, Gainesville, FL² University of Arizona College of Medicine, Division of Dermatology, Tucson, AZ**ABSTRACT**

We present the case of a 77-year-old female with seven non-locally advanced basal cell carcinomas (BCCs) of the face who achieved a clinical complete response (CR) in six lesions after completing twelve months of Vismodegib monotherapy with tolerable side effects. This case investigates the off-label practical use of Vismodegib monotherapy to treat multiple non-locally advanced BCCs and reduce the surgical burden of disease in select patients.

INTRODUCTION

BCC is the most common cutaneous malignancy with an increasing incidence rate since 1990.¹ Localized therapies are useful when disease involvement is minimal, multifocal, or in cosmetically sensitive areas which make surgical excision less feasible.² For metastatic or locally advanced BCC, frequently associated with significant morbidity, the hedgehog pathway inhibitor Vismodegib is an FDA approved and effective alternative.³ Occasionally, patients may present with multiple small BCCs simultaneously which are so numerous that excision and repair may be undesirable. The use of Vismodegib to treat non-locally advanced BCC has also been reported, although in conjunction with adjuvant imiquimod 5% cream.⁴ Vismodegib is taken once daily until clinical resolution of disease or intolerable side effects are reached, after which a pulse dose method of treatment has been suggested, however data and FDA approval regarding an intermittent administration schedule is lacking.³ Adverse

effects are expected during treatment, with muscle spasms, alopecia, and dysgeusia being most common.⁵

CASE REPORT

We report the case of a 77-year-old female who presented with a stage IIb melanoma of the right cheek and seven pearly pink papules and plaques (Fig. 1) highly consistent with superficial and nodular BCCs. Due to physical and emotional exhaustion following treatment of the right cheek melanoma, the patient opted against any further invasive procedures. Topical therapies were offered, however the nodular component of some of the lesions raised concerns of effectiveness and the multifocal nature raised issues regarding effective patient compliance. Radiation was discussed but considered an unattractive option given the numerous sites, repeated sessions, and her overall excellent health. Vismodegib was presented as an off-label option for potentially decreasing the size and number of lesions, and the patient started

September 2022 Volume 6 Issue 5

150 mg daily. She tolerated the medication well, noting minor eyebrow alopecia and occasional muscle cramps, neither of which were dose limiting. After nine months of therapy, the patient showed clinical resolution of all facial lesions (Fig. 2) and was switched to a pulse dose regimen (one month off, two months on) to maximize the durability of her response. At twelve months, 6/7 lesions maintained a CR and the Vismodegib was stopped, one lesion on the right mandible with a small focus of clinically recurrent disease was treated with imiquimod 5% cream.



Figure 1. Superficial and nodular BCCs on the face before treatment.



Figure 2. Resolution of all facial lesions after nine months of therapy with Vismodegib.

DISCUSSION

The treatment of multifocal BCC can be difficult for patients. Multiple surgeries can be tiresome, especially when extensive

reconstructions lead to prolonged recovery times or repeated procedures and wounds. Topical therapies minimize this concern, but in some cases, nodular or dispersive tumors raise issues with efficacy or patient adherence. Therefore, alternative options to decrease disease burden may be pursued initially. Vismodegib appears to be a reasonable alternative, with an objective response rate (ORR) of 42.9% at 9-month follow-up and 47.6% after 21 months of treatment.⁶ As seen in our case, Vismodegib may be a viable treatment option for reducing the surgical burden of disease or stabilizing tumors until patients are ready for more definitive therapy. In patients with numerous BCCs, even a fraction of lesions obtaining a CR can potentially mitigate procedures while still achieving positive outcomes, assuming side effects are tolerable. While our patient showed a clinical CR in 85.7% of her BCCs, no biopsy was performed to confirm histologic clearance, and the potential for future recurrence remains unknown. Additionally, counseling of the limitations and side effects of Vismodegib should be discussed, including the risk of developing noncontiguous tumor which may reduce the effectiveness of subsequent micrographically controlled surgery of nonresponsive lesions. Prospective trials utilizing Vismodegib for multiple, non-locally advanced BCC are needed to quantify overall clinical utility and the effect of pulse dosing on durability of response in these patients.

Conflict of Interest Disclosures: None

Funding: None

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