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A case of kidney transplant rejection secondary to cemiplimab for recurrent cutaneous squamous cell carcinoma

Um caso de rejeição de transplante renal secundária a cemiplimabe para carcinoma espinocelular cutâneo recorrente

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ABSTRACT

We report a case involving a 71-year-old male with a history of kidney transplant on immunosuppressive therapy and non-melanoma skin cancers who developed persistent lesions on the cheek and forehead after multiple skin cancer treatments. Biopsies identified poorly differentiated cutaneous squamous cell carcinoma. The patient underwent excisional salvage therapy with flap reconstruction, complicated by infection requiring debridement. He subsequently presented with in-transit dermal metastases and began treatment with cemiplimab. Unfortunately, after two cycles, he faced graft rejection and transitioned to hemodialysis. A recent PET-CT revealed no evaluable disease, and there were no clinical signs of recurrence at his last follow-up.

Keywords: Programmed Cell Death 1 Receptor; Carcinoma, Squamous Cell; Graft Rejection; Kidney Diseases.

RESUMO

Relatamos o caso de um paciente do sexo masculino, 71 anos, com histórico de transplante renal em uso de terapia imunossupressora e cânceres de pele não melanoma, que desenvolveu lesões persistentes na bochecha e testa após múltiplos tratamentos para câncer de pele. As biópsias evidenciaram carcinoma espinocelular cutâneo pouco diferenciado. O paciente foi submetido a terapia de salvamento excisional com reconstrução por retalho, que evoluiu com infecção necessitando de desbridamento. Posteriormente, apresentou metástases dérmicas em trânsito e iniciou tratamento com cemiplimabe. Infelizmente, após dois ciclos, evoluiu com rejeição ao enxerto e necessidade de hemodiálise. Uma PET-CT recente não revelou doença passível de avaliação e não havia sinais clínicos de recidiva em seu último seguimento.

Palavras-chave: *Receptor de Morte Celular Programada 1; Carcinoma Espinocelular; Rejeição ao Enxerto; Doenças Renais.*

Case report

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CASE REPORT

A 71-year-old male with a history of kidney transplant secondary to IgA nephropathy on tacrolimus and prednisone and multiple non-melanoma skin cancers, treated with photodynamic therapy, 5-fluorouracil, and Mohs surgery, presented to dermatology clinic with non-healing lesions of the left cheek and central forehead adjacent to previous Mohs scars. Examination revealed a scaly papule with an erythematous base on the left cheek and left forehead, a reddish-purple papule adjacent to a scar on the central forehead, and an ulcerated violaceous papule adjacent to a scar on the left anterior cheek/temple region.

Previous biopsies from the sites of concern found moderately well-differentiated squamous cell carcinoma. Biopsies obtained during the current visit revealed dermal deposition of poorly differentiated cutaneous squamous cell carcinoma extending to deep and peripheral margins. Special stains were positive for P63 and CD10 and negative for desmin and SOX-10 (Figure 1A and 1B).

In addition, the central forehead lesion had special stains positive for CK903, P40/CK 5/6, GATA-3, and PAX-8. The patient was diagnosed with recurrent locally aggressive cutaneous squamous cell carcinoma (T1N0M0) induced by post-transplant immunosuppressive therapy. He subsequently underwent excisional salvage therapy and local flap reconstruction. The postoperative course was complicated by skin graft wound healing and deterioration. Bacterial cultures grew Serratia marcescens resistant to augmentin, and the patient completed a course of Bactrim with concurrent wound debridement. The patient was found to have progressive gross residual in-transit dermal metastases at the graft site, for which cemiplimab was initiated (Figure 2). Initiation of cemiplimab required discontinuation of tacrolimus and initiation of sirolimus. The patient received two cycles of cemiplimab. Unfortunately, the patient presented to the emergency department with graft rejection secondary to cemiplimab. The patient was placed on hemodialysis and cemiplimab was discontinued. A recent PET-CT scan revealed no obviously evaluable disease. The patient had no clinical signs of recurrence at his most recent follow-up visit (Figure 3).

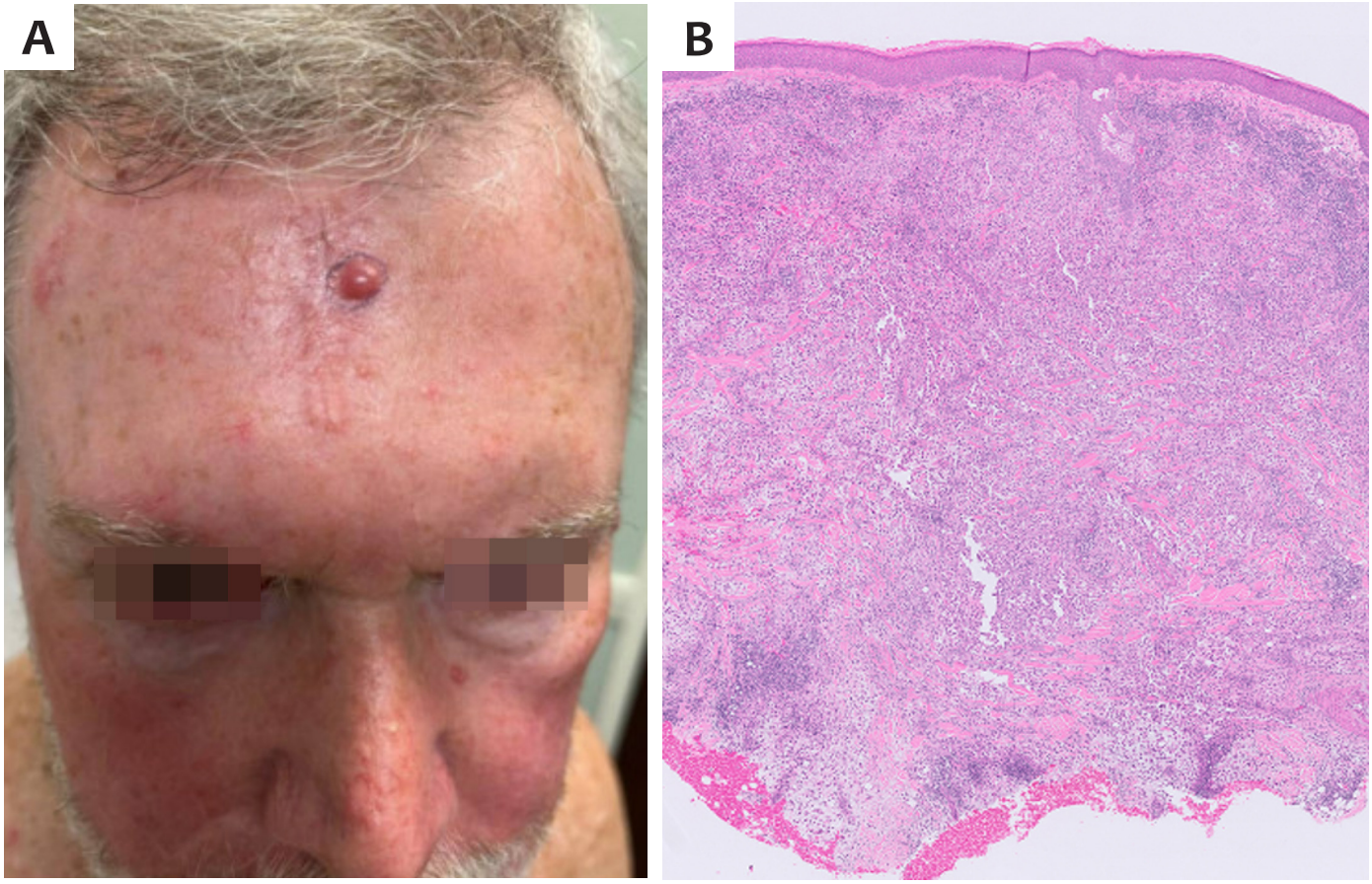

FIGURE 1: A - Initial clinical presentation and histology of central forehead biopsy showing a dermal deposit of poorly differentiated carcinoma. **B -** Initial clinical presentation and histology of central forehead biopsy showing a dermal deposit of poorly differentiated carcinoma.

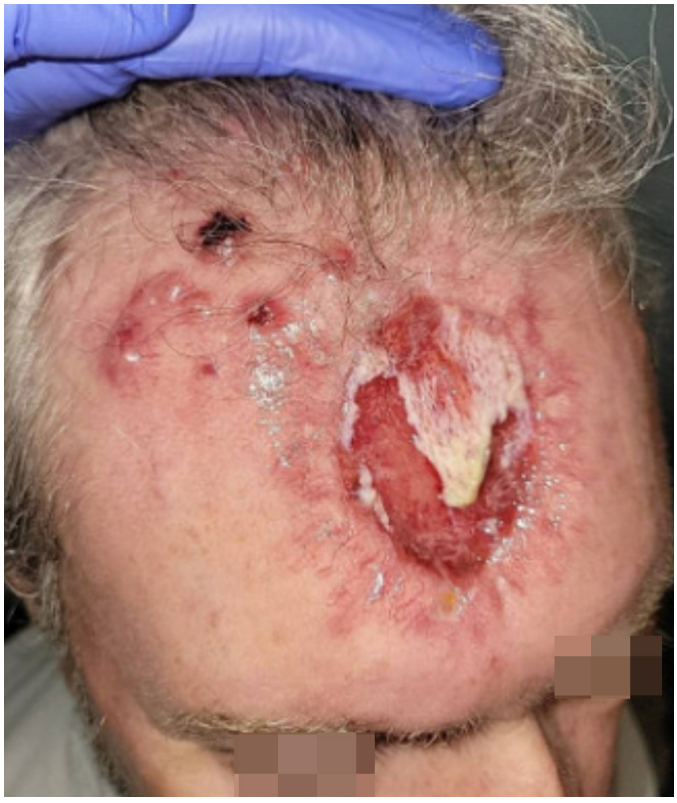

Figure 2: Progressive gross residual in-transit dermal metastases at the graft site 2 months after surgery

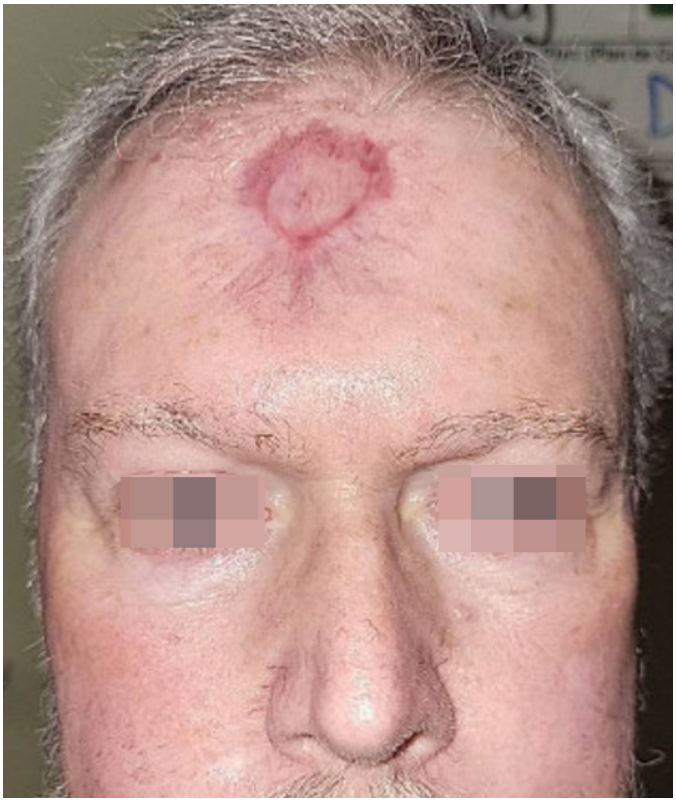

Figure 3: 5 months after surgery and 2 cycles of cemiplimab with no evidence of recurrence

DISCUSSION

Solid organ transplant recipients receiving chronic immunosuppression therapy have a markedly increased risk of developing cutaneous squamous cell carcinoma, accounting for 40% of all malignancies in organ transplant recipients. Cemiplimab is a monoclonal antibody directed at PD-1 which has shown significant responses in patients with locally advanced or metastatic cutaneous squamous cell carcinoma and has become a mainstay of treatment. Hanna et al. report that no kidney allograft rejection events were observed during a phase I study of cemiplimab for kidney transplant recipients with advanced cutaneous squamous cell carcinoma when used in combination with pulsed-dose corticosteroids and mTOR inhibitors. Cui et al. report that solid organ transplant rejection rates may be as high as 40% with anti PD-L1 agent monotherapy and suggest PD-L1 positive expression in graft biopsy may be an effective marker for predicting transplant rejection. ●

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AUTHOR'S CONTRIBUTION:

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Conception and design of the study, Preparation and writing of the manuscript, Acquisition, analysis and interpretation of data, Effective participation in the conduct of the study, Intellectual participation in the propaedeutic and/or therapeutic approach to the cases studied, Critical review of the literature

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