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Bilobed flap for reconstruction of wide-sized temporal forehead defect

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Abstract

We present the case of an 82-year-old woman with a basal cell carcinoma, whose excision resulted in a 6×4 cm defect, which was reconstructed using a bilobed flap.

The aim of this flap was to maintain the aesthetic boundaries of the forehead, either keeping symmetry with the contralateral side with minimal distortion, or taking advantage of the best color match of adjacent tissue.

Introduction

The bilobed flap is a local transposition flap primarily used for the reconstruction of small to moderate-sized cutaneous nasal defects. However, it can be used in reconstructions of other parts of the face or body (*e.g.*, trunk or feet).¹⁻⁵ Its principle is also advantageous in reconstructions of larger facial defects.⁴⁻¹¹

The temporal forehead is a challenging area for reconstruction.^{1-5,9-11} Often, skin cancers involving this region result in sizeable defects, either due to their clinical dimensions or because of extensive subclinical dissemination. The skin of the temporal forehead lies in a broad, flat plane with variable thickness. It is bounded by the eyebrow, the scalp hairline, and the lateral canthus, which limits the amount of available tissue for defect reconstruction.^{1-5,9-11} Thus, the temporal forehead is a challenging area for reconstruction, especially in the case of a wide defect.

Case Report

We present a case of an 82-year-old woman with a large, neglected basal cell carcinoma involving the temporal forehead area. The patient reported that the lesion had been present for approximately three years and had initially been ignored until it began to itch.

The excision resulted in a 6×4 cm defect (Figure 1). Under local anesthesia, reconstruction was performed using a bilobed flap in a single-stage procedure, as shown in Figures 2 and 3 and in the accompanying video.

We decided on this procedure because the patient refused a skin-graft and for the best aesthetic outcome. The design and execution of the transposition flap, as shown in the video, resulted in minimal tissue rotation and no distortion of the temporal area (Figure 4). The video also includes a close-up view of the surgical outcome two months postoperatively.

Discussion and Conclusions

In the literature, there are many descriptions of the reconstruction of temporal forehead defects.¹⁻¹¹ The primary closure is reserved for small defects, but it is not possible for large defects. Split-

thickness and full-thickness skin grafts are commonly used for this area, although they often provide a poor color match, and sometimes a wound contracture is observed. Therefore, these grafts are often a second choice. Reconstructions with other flaps, as advancement, rotation, or transposition flaps, have been described, sometimes in combination with grafts or second healing intention closure.^{1-5,9-11}

We decided to reconstruct the wide defect with a bilobed flap, because we aimed to maintain the aesthetic boundaries of the forehead, either keeping symmetry with the contralateral side with minimal distortion, or taking advantage of the best color match of adjacent tissue.^{2-3,5,9-11}

The outcome in our case was satisfactory for both the surgical team and the patient, as shown at the 2-month follow-up.

We present this case to emphasize that this type of reconstruction should always be considered for extensive defects of the face, even in challenging areas such as the temporal forehead. Compared to other techniques, it offers excellent preservation of skin texture and color, with minimal donor site morbidity.¹⁻¹¹

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Figure 1. Basal cell carcinoma, whose removal determined a 6x4 centimeter wide defect.



Figure 2. Bilobed flap reconstruction design.



Figure 3. Surgical reconstruction of bilobed flap.



Figure 4. Final surgery result of the transposition flap: minimal rotation and no distortion of the temporal area was determined.

