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Case Report

Combination of O-T and Rhomboid Flaps for Reconstruction of Two Facial Defects: A Case Report

Luana Machado Sakamoto[1], Bianca Miyazawa[2], Rogério Nabor Kondo[3*]

[1]Medical Student at the State University of Londrina, Londrina, Paraná (PR), Brazil

[2]Resident Physician in Dermatology at the University Hospital of the State University of Londrina, Londrina, Paraná (PR), Brazil

[3]Dermatologist, Assistant Professor of Dermatology of University Hospital of the State University of Londrina, Paraná, Brazil

***Correspondence author:** Rogério Nabor Kondo, MD, Dermatologist, Assistant Professor of Dermatology of University Hospital of the State University of Londrina, Paraná, Brazil; Email: kondo.dermato@gmail.com

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Abstract

Reconstructing closely adjacent defects in the facial region can be very challenging for the dermatologic surgeon, given the difficulty of preserving local function and aesthetics. To repair two facial defects after excision of basal cell carcinoma, we used an O-T flap combined with a rhomboid flap to close them, achieving a satisfactory outcome.

Keywords: Basal Cell Carcinoma; Surgical Flaps; Surgical Technique; Face

Introduction

Basal Cell Carcinoma (BCC) is the most common skin câncer [1]. When primary closure is not feasible, reconstruction can be challenging, as the flap or graft must preserve local aesthetics and function [2]. In cases of double defects that are close to one another, complexity may be even greater depending on the size and location of the defects, since the choice of repair method carries risks of anatomic distortion and dyschromia [3]. Full-thickness skin grafts provide good results because they maintain mobility and may produce less local distortion; however, this technique has the disadvantage of requiring a distant donor site, as well as a potential for dyschromia at the recipient site [4]. Flaps have the advantage of maintaining characteristics similar to those of the recipient area relative to the donor site. Nevertheless, there is a risk of anatomic distortion when planning is inadequate [4]. We report reconstruction using a combination of two flap types - an O-T Flap (OTF) and a Rhomboid Flap (RF) - to repair two closely adjacent facial defects after BCC excisions, achieving satisfactory aesthetic and functional outcomes.

Case Report

An 81-year-old white male presented with a 17 mm periorbital plaque in the lower left region and another 12 mm plaque in the left zygomatic region (Fig. 1). Histopathologic examination of the incisional biopsy confirmed superficial BCCs. The patient underwent the procedure, in which excisions were performed with 4 mm margins, followed by combined OTF and RF reconstruction (Fig. 1-4).

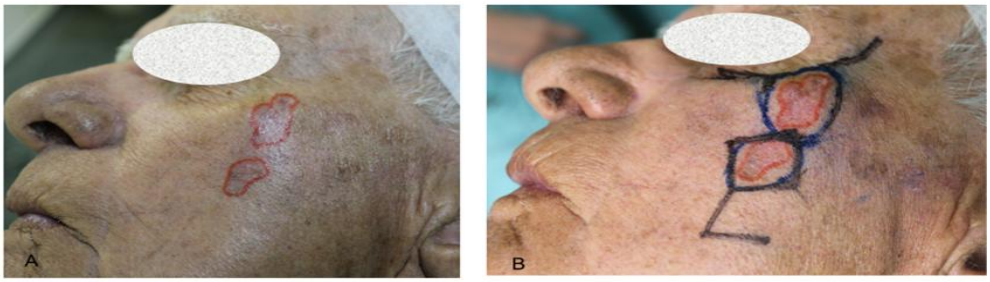

Figure 1: A. Patient with two superficial BCCs; B. O-T flap design for superior lesion and rhomboid flap design for inferior lesion.

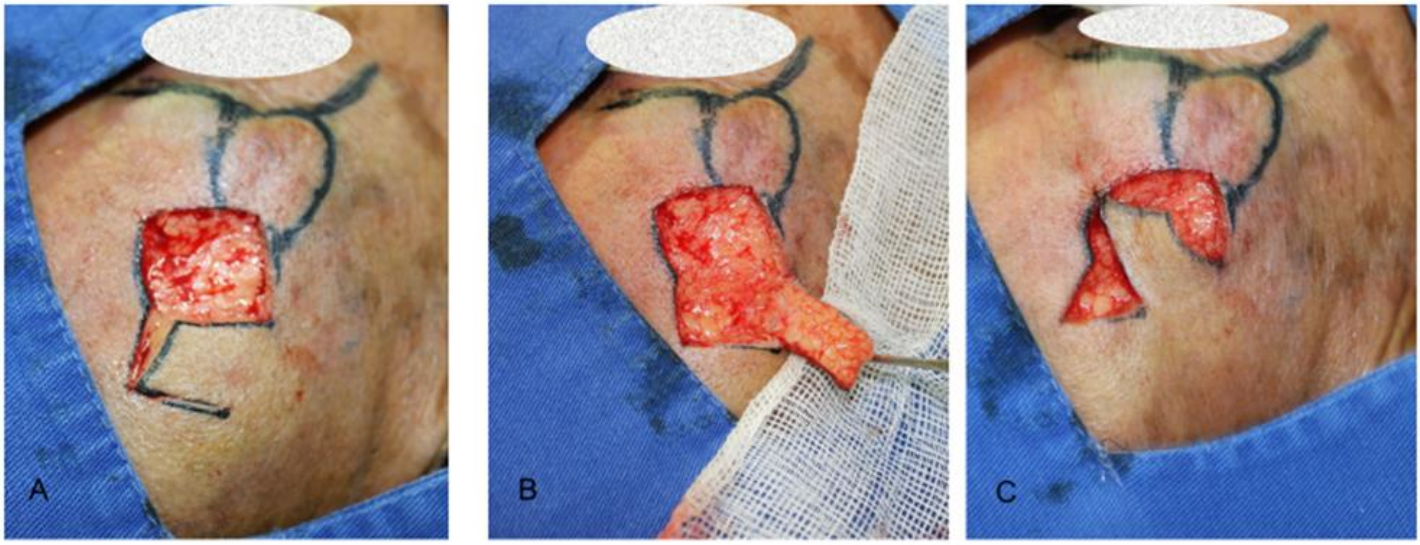

Figure 2: A. Defect; B. Detachment of the rhomboidal flap; C. First suture point of the rhomboid flap.

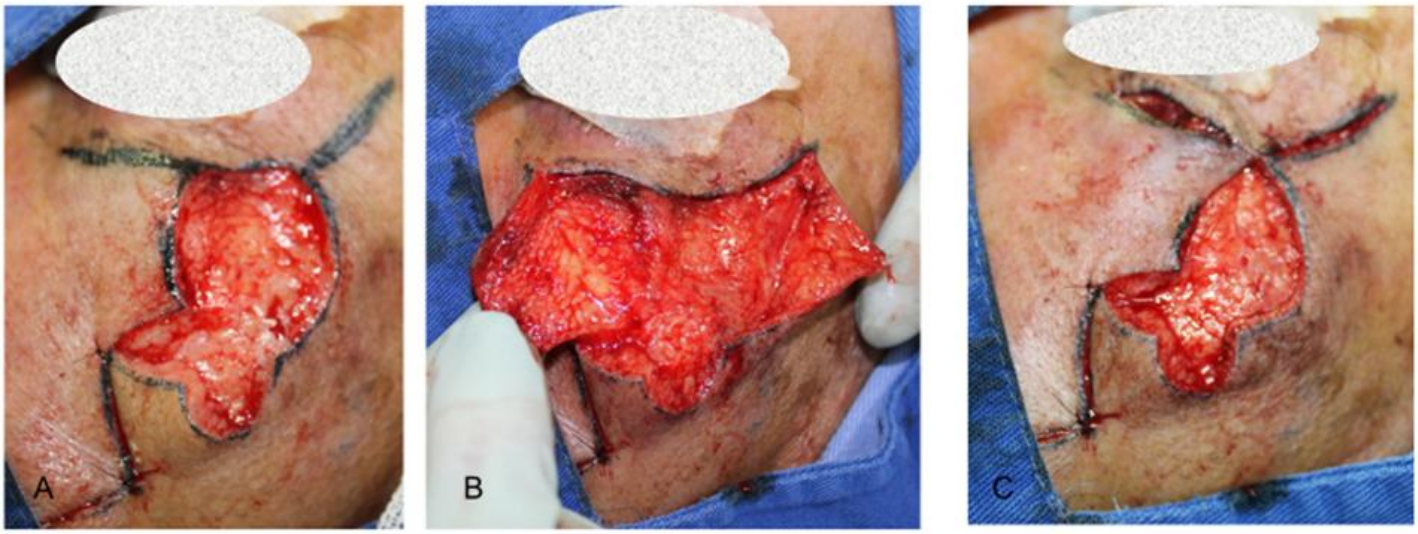

Figure 3: A. Superior lesion defect; B. Detachment of the O-T flap; C. First suture point of the O-T flap.

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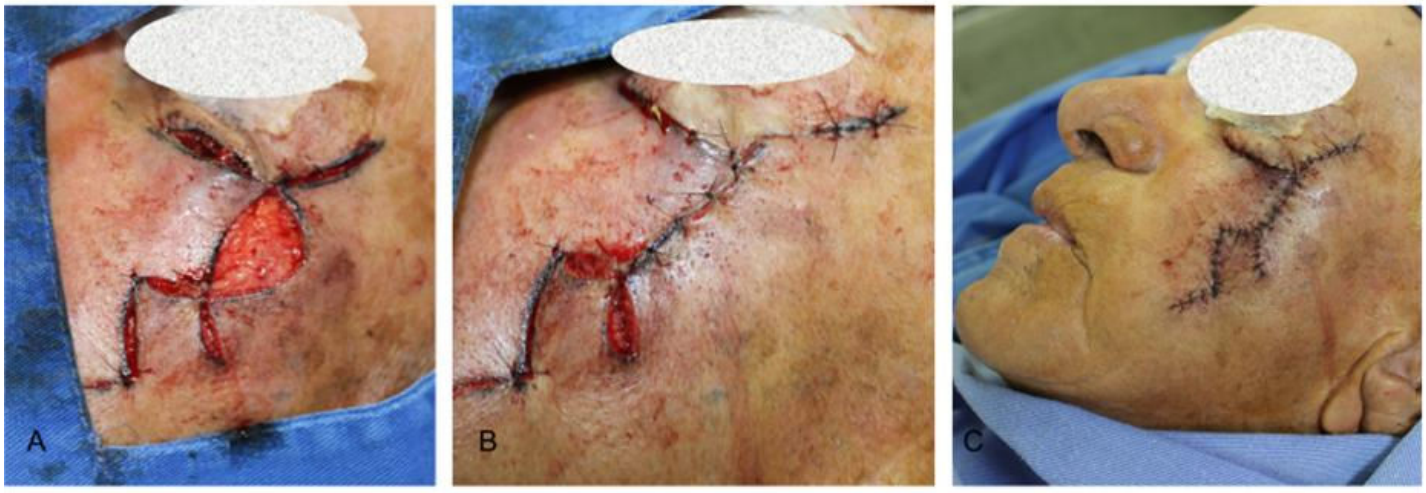

Figure 4: A. Rhomboidal flap positioned; B. Main suture points for the O-T and rhomboid flaps; C. Combined surgical flaps sutured.

Description of the Technique

a) Patient in horizontal supine position
b) Marking with a surgical pen of 4 mm margins from both lesions and drawing of an O-T flap (for the superior lesion) and rhomboid flap (for the inferior lesion)
c) Antisepsis with topical 10% povidone-iodine
d) Placement of surgical drapes
e) Local infiltrative anesthesia with 2% lidocaine with vasoconstrictor
f) Incision with a #15 blade as previously marked and en bloc removal of the inferior lesion
g) Incisions and creation of the rhomboid flap
h) Dissecting the rhomboid flap at the subcutaneous level with iris scissors
i) Positioning of the rhomboid flaps with 5.0 mononylon
j) Incision with a #15 blade as previously marked and en bloc removal of the superior lesion
k) Incisions and creation of the O-T flap
l) Subcutaneous dissection of the O-T flap using iris scissors
m) Positioning of the O-T flap with 5.0 mononylon
n) Simple suture with 5.0 mononylon
o) Cleaning with saline solution
p) Occlusive dressing with gauze

Results

The patient progressed with a satisfactory aesthetic outcome, with good healing and no signs of infection (Fig. 5).

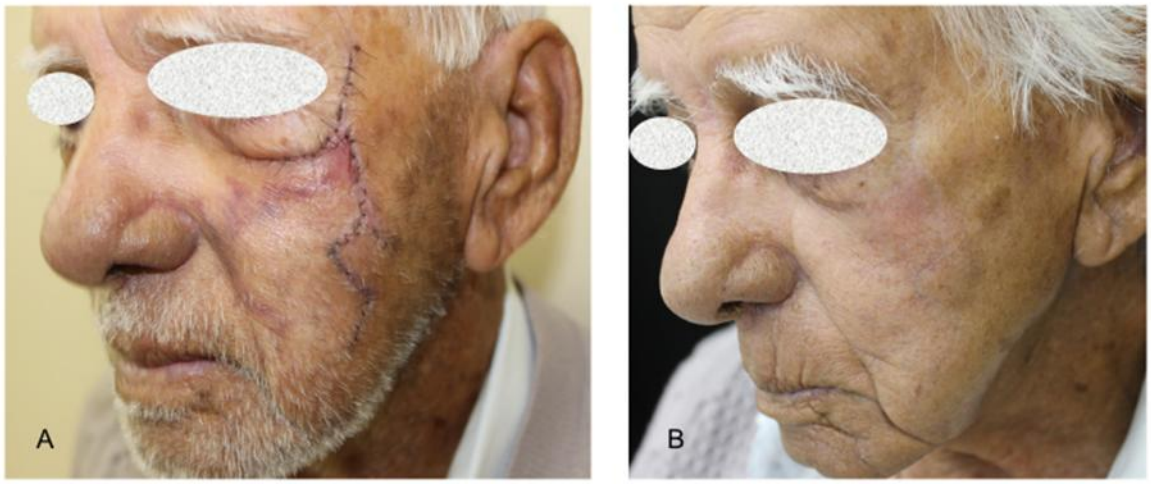

Figure 5: A. One-week post-surgery; B. Six months post-surgery.

Discussion

OTF is an advancement flap, but it also features a slightly rotation [5]. The circular defect resembles the letter O and at the base of the circle, incisions are made on each side, where the flap is detached and then the flaps are brought together, closing like a T (Fig. 1-4) [5]. RF is a transposition flap that moves laterally around a pivot point into an adjacent defect. It is used primarily on the face because of its versatility and favorable aesthetic results (Fig. 1-4) [6]. The combination of two or more flaps has been reported in the literature as a reconstructive option for adjacent or closely spaced defects. Double-rotation flaps, double-advancement flaps, Z-plasty and graft-plus-flap techniques have all been described [3]. However, to date, a combination of an OTF and a RF involving the infraorbital and zygomatic regions has not been reported. In the present case, the top bar of the "T" in the O-T flap is "hidden" within the infraorbital sulcus, whereas the other scars from the rhomboid flap are camouflaged along the natural contour of the zygomatic convexity (Fig. 5). Another advantage is that the donor area has texture and color similar to those of the recipient site, which would not be the case if a graft were used. Thus, combining an O-to-T flap with a rhomboid flap allowed reconstruction in a single operative stage and yielded satisfactory aesthetic and functional outcomes.

Conclusion

The combined OTF and RF technique may be another option for reconstructing two adjacent defects in the infraocular and zygomatic regions.

Conflicts of Interest

The authors declare no conflict of interest in this paper.

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None

Authors' Contributions

All authors contributed to conceptualization, treatment execution, manuscript writing and final approval.

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