



Research Article

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The Zitelli's bilobed flap in ala and nasal tip reconstruction

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Abstract

Background: The Zitelli's bilobed flap is one of the most useful local flaps for reconstruction of skin and soft tissue defects of the nose. Its main indications are small and circular wounds located on the distal third of the nose (tip and ala). **Aims and Objectives:** To describe our experience with the use of ZBF for reconstruction of small skin and soft tissue defects of the alar lobules and nasal tip following removal of skin tumors. **Materials and Methods:** In this paper, we report on our experience with a retrospective study of 23 cases with small defect located in ala and nasal tip between January 2009 and December 2015. **Results:** The study included 14 men and 9 women with a mean age of 48.08±14.13 years and sex ratio of 1.55, basal cell carcinoma removal was the most cause of defects in 82.6%. All patients underwent reconstruction by using Zitelli's bilobed flap. Aside from a few complications, the postoperative results were satisfactory for the majority of our patients. **Conclusion:** This flap is versatile, reliable and easy to implement especially when the principles of technique, patient and wound selection are carefully applied.

Keywords: Small nasal defects, Nasal reconstruction, Bilobed flap, Zitelli's bilobed flap (ZBF).

INTRODUCTION

Reconstruction of nasal skin defects after surgery or trauma has always been a significant challenge for the surgeon. A variety of aesthetic and functional reconstruction options are available, including primary repair, skin grafts, local or regional flaps, The Zitelli's bilobed flap (ZBF), as a local cutaneous flap, is possible and suitable for reconstruction of skin defects of the lower third of the nose that are 1.5 cm in diameter or smaller^[1].

MATERIALS AND METHODS

This is a retrospective study conducted in Ibn Sina university hospital of Rabat included 23 patients who have been treated for their small skin defects of the nose by using the ZBF over a period of 7 years between January 2009 and December 2015. Age, gender, localization, cause and size of defects, surgical management and follow-up have been studied. Patients with previous surgeries on the nose, with nasal full thickness defect, >2 cm in diameter, or defects located in the higher third of the nose were excluded from the study. Written informed consent was obtained from all patients for publication of this article. This study was approved by the ethical committee of our University (Mohamed V University of Rabat, Morocco).

RESULTS

The study sample included 14 (60.87%) male and 9 (39.13%) female with a sex ratio of 1.55. The average age was 48.08±14.13 years (age range from 23 to 78 years). The defect were located at the alar lobules in 12 cases (52%) and nasal tip in 11 cases (48%) and they were following removal of basal cell carcinoma in 19 cases (82.6%) and benign tumors in four cases. The defect involved just skin and muscle plane with a mean size of 13.69 mm (range from 8 to 19 mm). All nasal skin tumors specimens were sent for histopathological examination after Mohs surgery to ensure clearance of the margins. Reconstruction was performed under local anesthesia (lidocaine with adrenaline) and sometimes with a short period of propofol sedation. The ZBF design was performed with a surgical skin marker, its base was medial or lateral depending on the site of the defect (Figure 1, 2 and 5). The two lobes of ZBF were widely undermined above the periosteal and perichondrial planes to ensure adequate tissue perfusion and to

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facilitate transposition to the desired locations by rotation of 45° of each lobe (Figure 3). After rigorous hemostasis, internal sutures with monocryl or vicryl 5/0 were carried out, following by silk or nylon 4/0 sutures to close skin (Figure 6). Post-operative courses were uneventful except in two cases, which had infection of incision left in directed healing (Figure 4). All patients were available for mean follow-up of

7±2.53 months. No tumor recurrence occurred and no severe complications were reported. The cosmetic results were satisfactory: there was good nasal contour with inconspicuous scars and appropriate symmetry of the nasal tip with no alar retraction (Figure 7, 8 and 9).

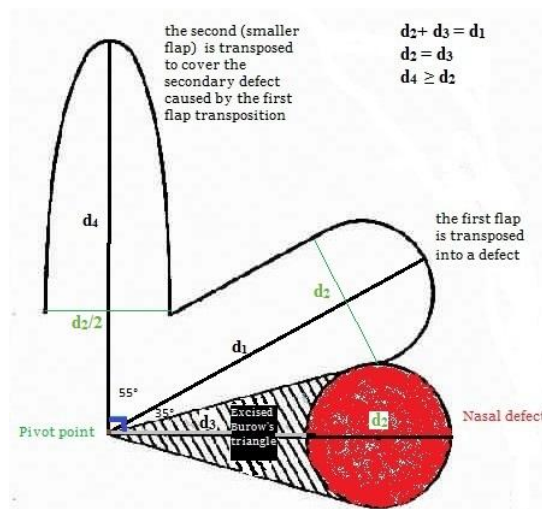


Figure 1: Illustration of the ZBF flap design.



Figure 2: the ZBF flap design for reconstruction of alar defect after tumor excision.



Figure 3: The two lobes of ZBF are widely undermined above the periosteal and perichondrial planes.



Figure 4: Infection of incision one week after the operation.



Figure 5: the ZBF flap design for reconstruction of alar defect after basal cell carcinoma removal.



Figure 6: Post-operative view: double transposition flap.



Figure 7: Nasal appearance one month after surgery.



Figure 8: Nasal appearance three months after surgery.



Figure 9: Nasal appearance one year after surgery: acceptable cosmetic result with inconspicuous scars.

DISCUSSION

Nasal reconstruction represents a significant challenge for most plastic and dermatologic surgeons. A variety of reconstruction options are suggested for partial-thickness defects of the alar lobules and nasal tip, including primary repair, skin grafts or local flaps such as bilobed flap, nasolabial flap or forehead flap^[2]. The bilobed flap was first described by Esser in 1918 for use in nasal tip defect reconstruction, it was a double transposition flap using two adjacent skin flaps at 90° to one another with a total rotation of 180°, this flap design produced several complications such as alar asymmetry^[3]. In 1953, it becomes popular when Zimany made a few changes on the design ensuring a good cosmetic result^[4]. In 1989, Zitelli has introduced this flap for reconstruction of cases with defects located on the alar lobules and nasal tip and between 0.5 and 1.5 cm in diameter^[5]. The ZBF is using two adjacent skin flaps at 45° to 55° to one another with a total rotation of 90° to 110°; The lobes are not identical in size, the first flap is transposed into a defect, and the second (smaller flap) often designed with an elliptical tip to facilitate closure is transposed to cover the secondary defect caused by the larger flap transposition, pivot point for alar defects is medial while it is lateral for tip defects^[6,7]. The ZBF is especially suitable for the reconstruction of defects that are 1.5 cm in diameter or smaller, using skin from the mid dorsum and the sidewall^[8], it enables defect closure with no or minimal distortion of the surrounding tissues and producing excellent color and texture match with adjacent tissue^[9,10]. The disadvantages of the ZBF are that it leaves circular and vertical scars specially seen in younger patients and individuals with darker skin tones, they may be treated by dermabrasion 5 to 6 weeks after surgery if needed^[11, 4]. Most of the patients in our study had discreet scars after reconstruction. It may sometimes result in nasal alar retraction, resulted from distal flap tension^[12], if flap was not properly undersized and widely undermined. The flap should be lifted below muscular plane to allow a good transposition, to reduce the risk of distal failure and to minimize a pincushion effect. An adequate Burrow's triangle should be excised from the point of rotation to avoid bunching and dog-ear formation^[13, 14]. Proper execution of this flap requires meticulous technique, appropriate patient and wound selection and informing to ensure an optimal cosmetic result.

CONCLUSION

The ZBF is a versatile and reliable flap for coverage of small skin and soft tissue defects of the lower third of the nose. It gives a successful outcome if it is designed well and performed properly.

REFERENCES

1. Iida N, Watanabe A. Usefulness of Simple-Designed Bilobed Flap for Reconstruction of Ischial Decubitus Ulcer. *Plastic and Reconstructive Surgery Global Open*. 2015; 3(9):e525.
2. Thornton JF, Griffin JR, Constantine FC. Nasal Reconstruction: An Overview and Nuances. *Seminars in Plastic Surgery*. 2008;22(4):257-268.
3. White CP, Rosen N, Muhn CY. The usefulness of the bilobed flap for lateral cheek defects. *The Canadian Journal of Plastic Surgery*. 2012; 20(1):e19-e21.
4. Zimany A. The bilobed flap. *Plast Reconstr Surg*. 1953; 11(6):424-34.
5. Zitelli JA. The bilobed flap for nasal reconstruction. *Arch Dermatol*. 1989; 125(7):957-9.
6. Cho M, Kim DW. Modification of the Zitelli Bilobed Flap: A Comparison of Flap Dynamics in Human Cadavers. *Arch Facial Plast Surg*. 2006; 8(6):404-409.
7. Salgarelli A, Cangiano A, Sartorelli F, Bellini P, Collini M. The bilobed flap in skin cancer of the face: Our experience on 285 cases. *J Craniomaxillofac Surg*. 2010; 38:460-4.
8. Ebrahimi A, Ashayeri M, Rasouli HR. Comparison of Local Flaps and Skin Grafts to Repair Cheek Skin Defects. *Journal of Cutaneous and Aesthetic Surgery*. 2015; 8(2):92-96.
9. Wang ZG, Chen XJ, Chen ZY. A modified bilobed flap design for nasal tip defects. *Plast Aesthet Res* 2014; 1: 16-20.
10. Tissiani LAL, Alonso N, Carneiro MH, Bazzi K, Rocco M. Versatility of the bilobed flap. *Rev. Bras. Cir. Plást*; 26(3):411-417
11. Monarca C, Rizzo MI, Palmieri A, Fino P, Parisi P, Scuderi N. Island pedicle and bilobed flaps in ala and back nose reconstruction: a prospective comparative analysis. *Aesth Plast Surg*. 2012; 36(5):1168-74.
12. Xue CY, Li L, Guo LL, Li JH, Xing X. The bilobed flap for reconstruction of distal nasal defect in Asians. *Aesthetic Plast Surg*. 2009; 33(4):600-4.
13. Moy RL, Grossfeld JS, Baum M, et al. Reconstruction of the nose utilizing a bilobed flap. *Int J Dermatol*. 1994; 33(9):657-60.
14. Salgarelli AC, Bellini P, Multinu A, et al. Reconstruction of Nasal Skin Cancer Defects with Local Flaps. *J Skin Cancer*. 2011; 2011:181093.