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Patch on Flap and Alectomy for Nasal Wing Grafting: Alternative for Aesthetic Refinement

Valderi Vieria*, Juliana Carvalho and Alferdo Lima Filho

Department of Plastic Surgery of Instituton Dr. José Frota, Fortaleza, Brazil.

Abstract

Background: Nasal deformities may be due to congenital malformations, trauma, sequelae of treatments for skin cancer surgeries, radiation or infections. Over the years, many alternatives have been developed for cutaneous coverage and cutaneous flaps have the best results. The skin should be replaced by one of similar color and texture, mimicking the characteristics of lost skin to the maximum. The objective of this work is to report a case of skin flap preparation for skin coverage in a patient previously submitted to nasal reconstruction with a genital flap due to resection of a nasal wing skin tumor that did not present a good aesthetic result and functional.

Method: Patient, 50 years old, male, previously submitted to resection of left nasal wing carcinoma with immediate reconstruction with local genital flap 2 years ago. Patient had small left nostril opening and base erasure of the nasal wing. There was functional complaint, with airflow obstruction. An advancement flap was designed based on the distal portion of the previous genital flap.

Results: The patient evolved without cutaneous suffering, however after 2 months presented partial stenosis with loss of about 30% of the narinarian opening obtained in the surgery. A 1 cm alectomy was programmed in the contralateral nostril and grafted to the left nostril.

Conclusion: The technique of local skin flap demonstrated a more satisfactory aesthetic result of nasal implantation, since it is a local skin covering, maintaining color, texture and natural appearance, as well as promoting a functional result that allows airflow normal.

Introduction

Nasal deformities may be due to congenital malformations, trauma, sequelae of treatments for skin cancer surgeries, radiation or infections. The first report of technique for nasal reconstruction was made by Sushruta Shamita, in 600 BC, which consists of the construction of a medial frontal flap. This technique is known today, called the Indian flap [1]. Burget and Menick (1985) revolutionized nasal reconstruction surgery, since they introduced the concept of aesthetic subunits of the nose: dorsum, lateral, tip, wing and columella [2].

Over the years, many alternatives have been developed for cutaneous coverage and cutaneous flaps have the best results both to restore normal appearance and to allow an open airway to allow satisfactory breathing. The skin should be replaced by one of similar color and texture, it is a consensus that the best tissue for reconstruction of the nose is the one with the greatest possible proximity to the defect, mimicking the characteristics of the lost skin to the maximum [3]. Traditional replacements have little resemblance to nose original.

***Address for Correspondence:** Valderi Vieria, Department of Plastic Surgery of Instituton Dr. José Frota, Fortaleza, Brazil; E-mail: valderijr@hotmail.com

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The coverage of the mucosal areas can be performed with septal flaps and oral cavity grafts. For better support, an alternative is the preparation of cartilaginous support with septal, concha or costal grafts or grafts [4, 3].

Objective

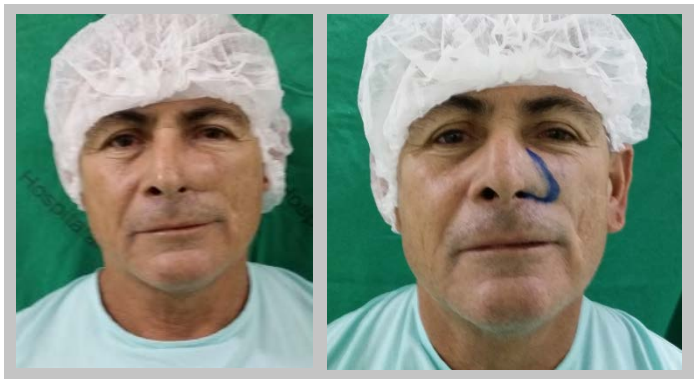
The objective of this study is to report a case of skin flap preparation for skin coverage in a patient previously submitted to nasal reconstruction with a genital flap due to resection of a nasal wing skin tumor, which did not present a good aesthetic result. A graft of atrial cartilage and oral mucosa graft with good nasal implantation and a satisfactory aesthetic result were also performed.

Patient and method

Patient, 50 years old, male, previously submitted to resection of left nasal wing carcinoma with immediate reconstruction with local genital flap 2 years ago. He sought the plastic surgery service of a public hospital to improve the aesthetic and functional aspect. At the examination, the patient presented with a small left nostril opening and a base erasure of the nasal wing due to previous reconstruction. There was a functional complaint, since he had airflow obstruction.

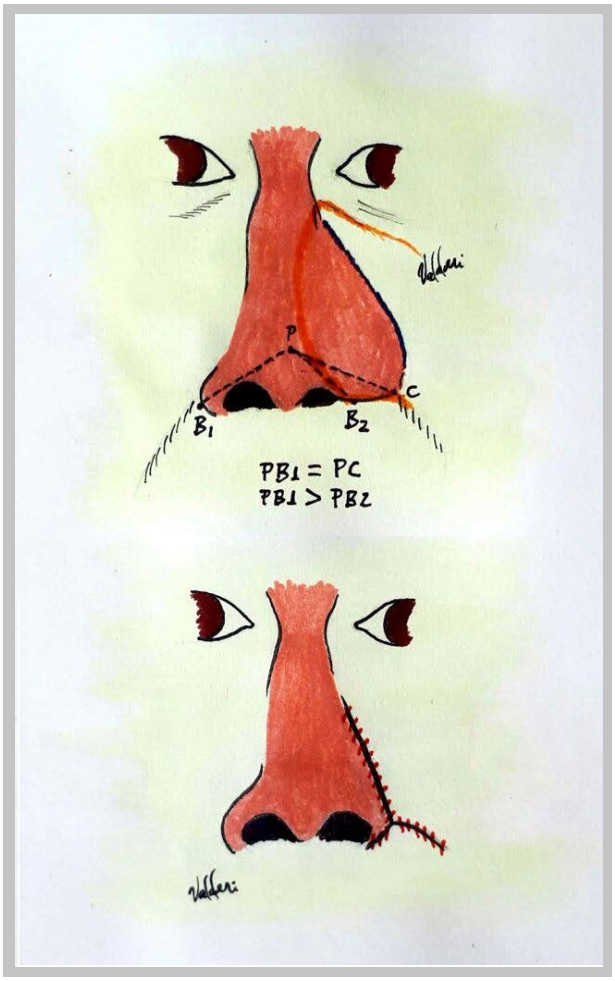
During the surgery, an advancement flap was designed based on the distal portion of the previous genital flap. The tip-to-base measure of this flap had the same measure from the nasal tip to the

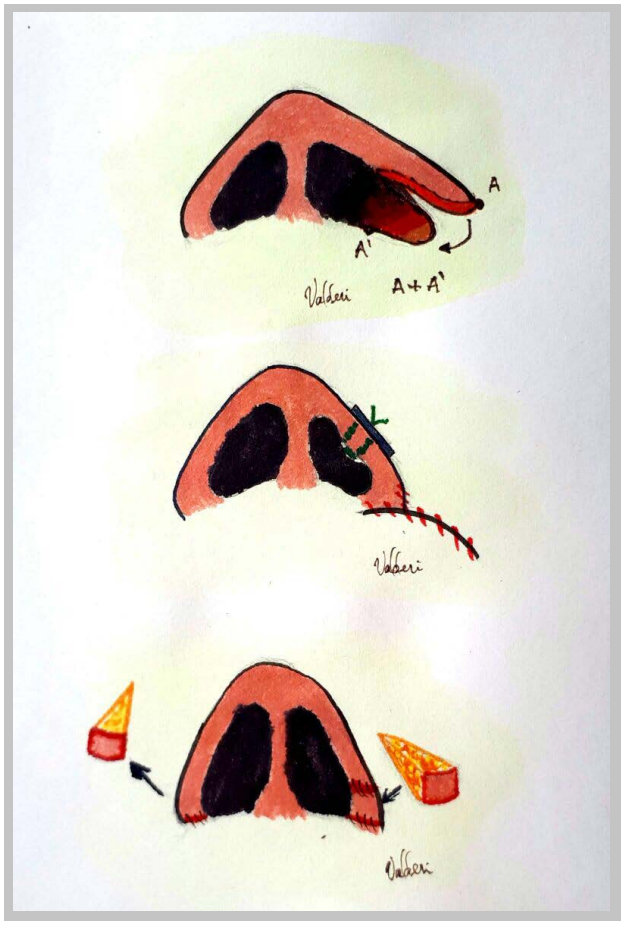
contralateral nasal base. After incision of the flap, the cutaneous tissue was removed and the entire lesion was dissected to evaluate the size of the mucosa defect, where a flap of mucosa was observed obstructing the nar- nary opening, which was then incised.

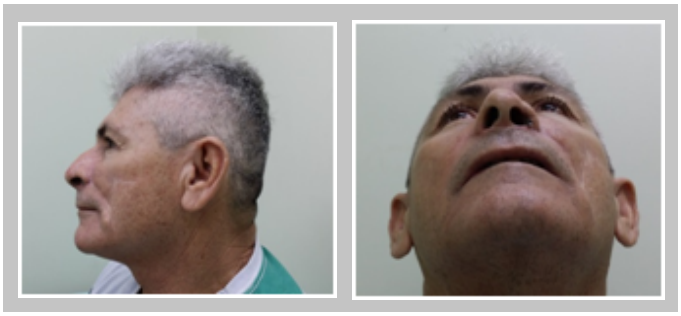


A graft of auricular shell cartilage was removed, modeled and grafted in the left nasal wing region next to the Gunter [1] graft to avoid collapse. In the mucosal defect, oral mucosa was grafted. The cutaneous flap was then advanced and covered the mucous and cartilaginous grafts.

Patient evolved without cutaneous suffering. However, after 2 months it evolved with partial stenosis and lost up to 30% of the narary opening obtained in the surgery. A second surgical time was then scheduled to achieve a new opening and performed a 1 cm alectomy in the contralateral nostril and graft in the left nostril. To avoid stenosis, a cylindrical silicone orthosis was placed, which was removed after 15 days, from which the patient could withdraw to sanitize it and replace it. The orthosis was definitely removed after 4 months. The 1-year outpatient follow-up did not show loss of outcome and showed good narcotic symmetry.







Discussion

In the past, the main concern was tissue transfer, with skin flaps and grafts, blood supply and coverage of the anatomical layers. The strategy did not take into account the aesthetic aspects of projection, symmetry, skin quality and three-dimensional contour. The consequences were: scars contracted, bulging and collapse of the airway and aesthetic result unsatisfactory.

Primary lesion repair is an option in cases of minor defects, less than 5-6mm due to modest excess skin on the upper two thirds of the nose. As there is no extra skin available on the thick and adherent skin of the nose, primary closure can lead to distortion and wide and depressed scars [2].

Another option is the transfer of skin from the medial region of the cheek and lateral of the nasolabial fold, the nasolabial flap. It is a good option in cases of nasal wing loss requiring replacement of the entire subunit, as it has good blood supply to the facial and angular arteries and the scar is at the level of the nasolabial fold. The disadvantage is the limited size of this skin cover in order to maintain a good aesthetic result.

In this case, a nasal wing reconstruction with local cutaneous flap was performed. The cutaneous cover with local flap uses very similar skin type and texture, allowing a more natural result, which is a limiting factor in free flaps or distant flaps [1].

An atrial cartilage graft was used, but costal cartilage may be an option in cases of insufficient septal or atrial cartilage. In the present case, an oral mucosal graft was used in addition to the atrial cartilage graft for support, to reconstruct the nasal lining.

One of the techniques used was graft obtained from the contralateral alectomy, without the need for new rotations of local flaps or correction of nostril position, conferring symmetry and good implantation

Conclusion

Cutaneous flaps that are used for nasal coverage, such as nasogen, mid-frontal or skin grafts, are very well known and may confer a good functional result, but they still lack in the nasal implantation and aesthetic result.

The technique presented local skin flap presents a more satisfactory aesthetic result of nasal implantation, since it is a local skin covering, maintaining texture, color and natural appearance, besides promoting a functional result that allows normal airflow.

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