

As I Do

Healing by secondary intention of the nasal ala: reviewing old concepts

ABSTRACT

Surgical repair of large defects in nasal ala is often needed. There are several reconstruction techniques, which in general are complex, require greater technical knowledge, and not always reach the desired aesthetic result. The authors discuss the indications and practicality, in addition to good cosmetic results of healing by secondary intention of large defects in nasal ala.

Keywords: wound healing, nose, basal cell carcinoma.

INTRODUCTION

Major surgical reconstructions in the nose are always challenging and, when involving the nasal ala, the challenge is even greater. Several reconstruction techniques have been described, with their indications often guided by the size of the defect.^{1,2}

Small defects in nasal ala can be difficult to solve and when larger than 1 cm, they direct the surgeon to reconstructions using large flaps or grafts. Procedures are complex, time-consuming, and often leave scars distant from the primary defect. Moreover, the cosmetic result is not always the desired.

Healing by secondary intention for defects in the face has been well studied.^{3,5} Usually, it is not the first option, been remembered on concave facial areas and small, superficial defects away from free edges.⁴ In nasal ala, it is often referred when performing electrocoagulation and curettage for small tumors.

Currently, little is discussed about this technique in literature, and its usefulness as a practical and cosmetically acceptable option to many areas of difficult reconstruction or with a higher risk of recurrence.

MATERIAL AND METHODS

Basal cell carcinomas (BCC) of various sizes located in nasal ala were surgically excised, creating primary defects similar to or greater than 1 cm. Whenever these defects didn't reach the alar fold, didn't approach the nasal alar rim, and when the depth was limited to the subcutaneous tissue, they were left to heal by secondary intention, even if they involve almost the total area of the nasal ala (Figures 1A and 2A). Patients were instructed to perform daily cleaning and application of antibiotic ointment starting 24 hours after surgery.

RESULTS

All patients evolved without any pain or bleeding, and showed only some difficulty in cleaning the wound properly, but there were no cases of secondary infection. Aesthetic results were good, with great acceptance by patients (Figures 1B and 2B). Skin retractions occurred only when the defect reached less than 3 mm from the nasal rim, or invaded the nasolabial fold (Figures 3A and 3B); however, no patient opted for corrective surgery afterwards.

DISCUSSION

Different types of flaps or grafts are almost always the first choice for reconstructions on nasal ala.^{1,2} Performing these reconstruction requires good technical knowledge, prolonged surgical time, which increased costs, besides generating scars outside the primary defect area. There is also the risk of bleeding, flap necrosis, or graft loss and wound dehiscence, which can compromise the final result.

Authors:

Ivander Bastazini Júnior¹
Leticia Arsie Contin²
Cinthia Janine Meira Alves³
Consuelo Maria Santos
Albuquerque Nascimento⁴

¹Dermatologist, Chief of
Dermatologic Surgery Department
at the Institute Lauro de Souza Lima
²Dermatology Resident
³Dermatology Resident Physician
⁴Dermatologist

Correspondence to:
Rodovia Comandante João
Ribeiro de Barros KM 225226.
Caixa postal 3021.
CEP: 1703-4971
Bauru – SP.

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Figure 1A – Lesion in the immediate postoperative period.
Figure 1B – Postoperative lesion in Figure 1A: 2 months follow-up.



Figure 2A – Lesion in the immediate postoperative period.
Figure 2B – Postoperative lesion in Figure 2: 6 months follow-up.



Figure 3A – Lesion reaching the nasal alar rim.
Figure 3B – Postoperative lesion of Figure 3A with 3 months follow-up and retraction of the nasal rim.

When healing by secondary intention is allowed, most of these risks are reduced, creating a single wound, easy to care, and that rarely bleeds or infects.⁵ It also facilitates the early recognition of tumor recurrence signs, which could be restrained by flaps or grafts.^{3,4} Also, a theoretical advantage, although not scientifically proven, would be the possibility that the slow healing process and wound repair would have a protective action against tumor recurrence.³

Zitelli considers the lesion site as the most important predictor for the aesthetic result. Other factors such as age, skin thickness, density of adnexal structures, and nutritional status would have less importance.⁴ Concave surfaces areas of the nose, eyes, ears and temples heal with excellent cosmetic results, while areas of convex surfaces give origin to more apparent scars. In the nose, lesion in the alar and nasolabial folds evolve with optimum results, while wounds on both nasal tip or dorsum don't have the same evolution.⁴ For some authors, the alar rim retraction occurs rarely and only if the wound

involves most of the nasal ala or reach a few millimeters from the alar rim.⁴ In the cases presented here it was observed that, when the injury affects much of the nasal area, retraction can occur. However, the most important factors causing retraction were the proximity of the nasal alar rim (distance less than 3 mm) and invasion of nasolabial fold (Figures 4A and 4B). When these limits are respected, even if most of the nasal ala is removed, healing occurs properly and, if retraction occurs, it will be mild. Hypertrophic scars were not observed in any case.



Figure 4A – Lesion involving a large area and invading the nasal alar fold.
Figure 4B – Postoperative lesion of Figure 4A with 6 months follow-up showing alar fold retraction.

Skin color and lesion depth are also important factors in the aesthetic result. Mature scars tend to be pale, which is less noticeable in fair-skinned people, while the more superficial scars tend to look better.⁴ Surgical wound is easy to care, with daily cleaning and ointment application. Dryness and crusting should be avoided, as it would further delay the healing process. The healing period is long and depends on the size of the wound, which could exceed three weeks. Use of occlusive dressings in the early days helps shorten this period. Slow healing is the main drawback of the technique, which may delay the return of patients to their activities.

In conclusion, the use of healing by secondary intention to major defects in the nasal ala is possible, practical, easy, and well accepted by patients. It provides good aesthetic results provided that the minimum distance from the alar rim and nasolabial fold is observed. It can also, in some situations, be included among the first options for reconstruction of nasal ala, avoiding the great time spent in complex surgeries.

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