CASE REPORT

Shark island pedicle flap for repairing of basal cell carcinoma localized in nasal ala-perialar region. A simple procedure *

Retalho em ilha de tubarão: uma técnica cirúrgica reconstrutiva de defeitos localizados na área nasal alar/perialar. Um procedimento simples

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Abstract: Basal Cell Carcinoma is the most common skin cancer. We describe a single-staged technique for correction of nasal ala defect after the excision of a basal cell carcinoma. This technique allows correction of surgical defects of the ala rebuilding the original anatomy, maintaining cosmetic units, without need for a graft.
Keywords: Carcinoma, basal cell; Cosmetic techniques; Cure in homeopathy

Resumo: O Carcinoma Basocelular é a neoplasia cutânea mais frequente. Os autores descrevem uma técnica realizada unicamente num tempo operatório para correção de defeitos na asa do nariz após excisão tumoral. Esta técnica simples permite a correção cirúrgica de defeitos nesta localização possibilitando a reconstrução da anatomia local e a preservação das unidades cosméticas, sem a necessidade de enxerto.
Palavras-chave: Carcinoma basocelular; Cura em homeopatia; Técnicas cosméticas

INTRODUCTION

Basal cell carcinoma (BCC) is the most common skin cancer in countries with fair skinned individuals and constant sun exposure.

Each patient with BCC should be evaluated individually: age, sex, size, location and type of lesion are aspects that need to be considered when planning the treatment approach. Some aspects that also need to be taken into account are the expectations of the patient, the surgical defect, the maintaining of the different cosmetic units and the final cosmetic result.

The objective of the treatment is the cure with the best possible cosmetic result, since the majority of these tumors occur on the face. The choice between direct closure, flap, graft or second intention healing can be complex.[1, 2]

If the wound does not heal well by second intention and a direct closure might cause too much tension, distort anatomic structures by crossing cosmetic units or result in an unacceptable scar, a flap or graft should be considered.

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The nasal ala/perialar region includes the concave intersection of the lateral nasal ala, lateral nasal sidewall, malar region and upper lip skin, posing a challenge for reconstructive surgery of the area due to the involvement of distinct cosmetic units, when the violation of them can cause the loss of the nasal alar sulcus and destruction of the different cosmetic units. [2, 3]

The technique used in this case was previously described by Cvancara and his collaborators, being the only reference on the literature.

Described in 2006, the procedure can be performed in a single surgical stage, under local anesthesia, where an island flap originated from the nasolabial or paranasal skin includes a superior arm that will be rotated 90° in relation to the surgical defect created after the excision of the lesion (irrespective of the histological type); after this rotation the alar portion of the flap forms an inverted cone of redundancy, thus recreating a "natural" nasal sulcus, preserving its normal anatomy, without the need of anchoring sutures.[3]

CASE REPORT

The authors describe a surgical technique performed in one single surgical stage for the correction of a defect of the nasal ala after excision of a lesion suggestive of nodular BCC for histopathological examination.

The patient was a 65 years old female with an ulcerated nodule measuring 7 by 6 mm, with pearly borders and local **telangiectasias**, highly suggestive of BCC, located on the right nasal alar/perialar region (Figure 1).

The shark island flap (SIF) is an island flap with a pedicle where:

a) The superior arm is rotated 90° in relation to the surgical defect, repairing its nasal area (Figures 2 and 3);

b) Then the rotation of the superior arm of the flap forces the nasal portion of the flap to tilt 90º in relation to the rest, forming an inverted cone of redundancy, resulting in a natural recreation of the external nasal ala and the nasal alar sulcus, without the need of anchoring sutures (Figure 4);

c) The final cosmetic result is highly satisfactory (Figures 5 and 6).

DISCUSSION

Due to the location of the surgical defect the options for surgical reconstitution would be the use of a transposition flap (bilobed from the nose) or a graft.

In relation to the first, it is one of the flaps with the highest technical demand in both the planning of the technique and in the prediction of the tension vectors that will be formed with the transposition movement. It was initially described by Esser and adapted by Zitelli[4], being particularly useful for defects of the distal portion of the nose, allowing for the repairing of the surgical defect with identical skin (color, texture, sebaceous glands, matching actinic damage and density of hair follicles); despite the great cosmetic potential it can lead to distortion of the alar border (which could happen due to the location of the surgical defect in our patient).

The myocutaneous pedicle flap, initially described by Asgari, is a technique for correction of defects located on the nasal ala with obvious advantage due to the resemblance of the skin that closes the defect, the possibility of being performed in a single

Figure 1: Ulcerated nodule suggestive of BCC on the right nasal sidewall

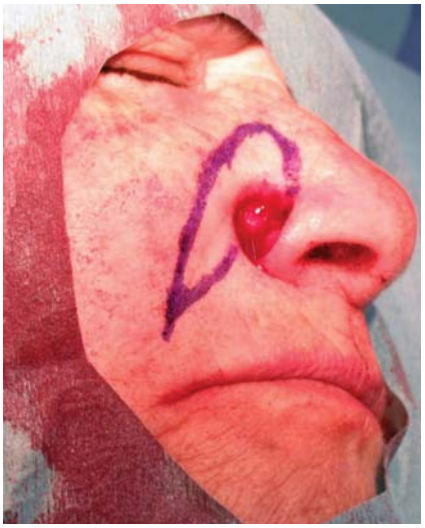

Figure 2: Surgical defect created after surgical excision of the lesion

Figure 3: Rotation of 90º of the superior arm in relation to the surgical defect, repairing its nasal area

Figure 5: Suture of the remaining flap

surgical stage and the ability to minimize the risk of retraction (which happened in one of the ends of the flap in our patient); however, it requires an adequate knowledge of local anatomy (notably the muscular component), small size defects, performing of anchoring sutures at deep levels and, most of all and contrary to the present case, location of the defect on the superior portion of the nasal wing in order to minimize the risk of necrosis of the flap. [2]

The use of a graft is still a versatile and efficient technique, allowing a complete correspondence between the defect and the donor area, less local edema and smaller number of incisions along the tension lines; additionally, when compared to the flaps described above, it is easier to plan, without the risk of formation of tissue redundancy. The great disadvantages are the more deficient vascularization in relation to the flap and the disparity of the skin between the receiving and the donor areas.[5, 6]

This clinical report confirms the work described by the group of Cvancara, making it possible to ascertain it as an useful and reproducible technique in a single surgical stage, where the cosmetic and functional repair of the alar/perialar nasal area and the rotation of the flap leads to the formation of a cutaneous redundancy (which might be considered a disadvantage of this kind of flap, as reported) spontaneously recreating a perfectly defined nasal sulcus, as illustrated. ❑

Figure 4: Formation of an inverted cone of redundancy that recreates the alar sulcus, without the need for anchoring sutures

Figure 6: 15th postoperative day: good cosmetic result, with a slight depression of the end of the flap on the nasal sidewall and without necrosis of the flap

REFERENCES

1. Levasseur JG, Mellette JR Jr. Techniques for reconstruction of perialar and perialar nasal ala combined defects. Derm Surg. 2000;26:1019-23.
2. Asgari M, Odland P. Nasalis island pedicle flap in nasal ala reconstruction. Dermatol Surg. 2005;31:448-52.
3. Cvancara J, Wentzell JM. Shark island pedicle flap for repair of combined nasal ala-perialar defects. Dermatol Surg. 2006;32:726-9.
4. Zitelli JA. The bilobed flap for nasal reconstruction. Arch Dermatol. 1989;125:957-9.
5. Tomich JM, Wentzell JM, Grande DJ. Subcutaneous island pedicle flaps. Arch Dermatol. 1987;123:514-8.
6. Cook J, Goldman GD. Random Pattern Cutaneous Flaps. In: Robinson JK, CW Hanke, Sengelmann RD, Siegel DM, editors. Surgery of the skin Procedural Dermatology. Philadelphia: Elsevier Mosby; 2005. p. 329-334.

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