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Bilobed flap utility for local defects due to facial basal cell carcinoma. Case reports. Instituto de Prevision Social

Utilidad del colgajo bilobulado en defectos por carcinoma basocelular de la región facial. Reporte de casos. Instituto de Previsión Social

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ABSTRACT
Basal cell carcinoma is a common condition throughout medical centers in Paraguay. The nasal alar region is disadvantaged compared to other body regions due to prolonged exposure to ultraviolet radiation. However, these tumors generally have a good prognosis. The lack of nodal dissemination and distant metastasis makes them quite manageable. The bilobed flap is an excellent option for small defects in this region; it is practical and yields excellent aesthetic results.

Keywords: basal cell carcinoma, surgical flaps, ultraviolet radiation.

RESUMEN
El carcinoma basocelular, es una patología de presentación frecuente centros nacionales de referencia. La región del ala nasal sufre una desventaja con respecto a otras regiones del cuerpo debido a su exposición prolongada a la luz solar. Pero, estos tumores son de buen pronóstico en general. La falta de diseminación linfática y de metástasis a distancia los hacen bastante controlables. El colgajo bilobulado representa una excelente opción para defectos pequeños en esta región, es practico y deja resultados estéticos excelentes.

Palabras clave: Carcinoma basocelular, colgajos quirúrgicos, rayos ultravioletas.

INTRODUCTION

Basal cell carcinoma (BCC) represents an increasingly frequent cutaneous disease on the worldwide population, with Paraguay not being the exception. Several elements have contributed towards the rising prevalence and incidence of this disease, elements that are easily found on the national population.[1]

According to a research performed in the Universidad Nacional de Asunción-Paraguay, the most affected population are senior citizens (50 to 59 years-old) with a slight predisposition towards the female gender (54,6%). These patients report very early due to the injuries being located on the facial region, which invades tissues and adjacent structures by direct extension, leaving important aesthetic deformities if left free to evolve, yielding metastasis on rare occasions. They generally present only once, but are capable of doing so multiple times as per Gorlin-Gotz syndrome.[2] There are multiple subtypes, but the most frequent one is the ulcerated nodule, with surgery being the most effective treatment on the majority of cases.[3]

Surgical resection of small defects with bilobed flaps for reconstruction is ideal for facial regions. The bilobed transposition flap has ideal characteristics as follows:

- Proximity to the defect.
- Is sizable enough.
- Has enough volume to cover the defect.
- Minimal tractions during the procedure.[4]

The security margin for injuries lesser than 2 cm and with properly defined limits is 3-4 mm, with a tumor-free margin rate of approximately 95%. In regard to the depth it must encompass the entirety of the dermis or up to half of the subcutane-

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ous cellular tissue. The pivot movement of the flap is between 90° to 100°. This movement variability yields excellent aesthetic results.[4]

In this work, evidenced by the two clinical cases, we exhibit the handling of these small cutaneous tumors and the versatility of the bilobed flap once mastery over its principles is achieved.

CLINICAL CASES

CASE 1

An 83-year-old female patient, from the city of Concepción, Paraguay. First visit to the dermatology department for an ulcerated injury located on the face. No relevant pathological history nor associated pathologies. She works on the countryside under several hours of solar exposure, many times without physical protection. As surgical history, a similar injury on the upper lip vermilion must be mentioned, which required surgical treatment also through BCC without local recurrences.

The patient reports with an evolution of approximately 3 years of erythematous aspect-ulcerated lesion with an oval size of 0.5 cm, unproperly defined edges and different skin tones. ***(Figure 1)***.

Solar exposure yielded itching and local pain. Said injury is reported to have the same latency for a period of 2 years without change. On the past 6 months symptoms resurface and there is a change in the dimensions of the injury, reaching 1.5 cm.

A biopsy of the injury was performed as outpatient which confirms the diagnosis of ulcerated BCC that infiltrated up to the reticular dermis ***(Figure 1, panel A)***. Surgical resection demarcating of the flap through modified transposition was performed under balanced general anesthesia, with a single lobe, given that the patient's skin laxity allows ample movement of the flap's pivot ***(Figure 1, panels B and C)*** achieving a tension-free closure utilizing a non-absorbable monofilament suture 3.0 ***(Figure 1, panel D)***. The pathological report showed BCC infiltrating up to the reticular dermis with injury-free margins.

CASE 2

An 82-year-old female patient, retired, from the city of Asunción, Paraguay. No personal pathological history. Reports an approximately 1-year evolution of a small, crusted ulceration of 0.5 cm located on the nose's wing. The size has increased with tonal changes on the past months. It presents spontaneous bleeding during desquamation.

The pain grows more intense during the last week, with frequent bleeding. It is worth mentioning that the patient performed many leisurely activities out in the open without protection against solar radiation.

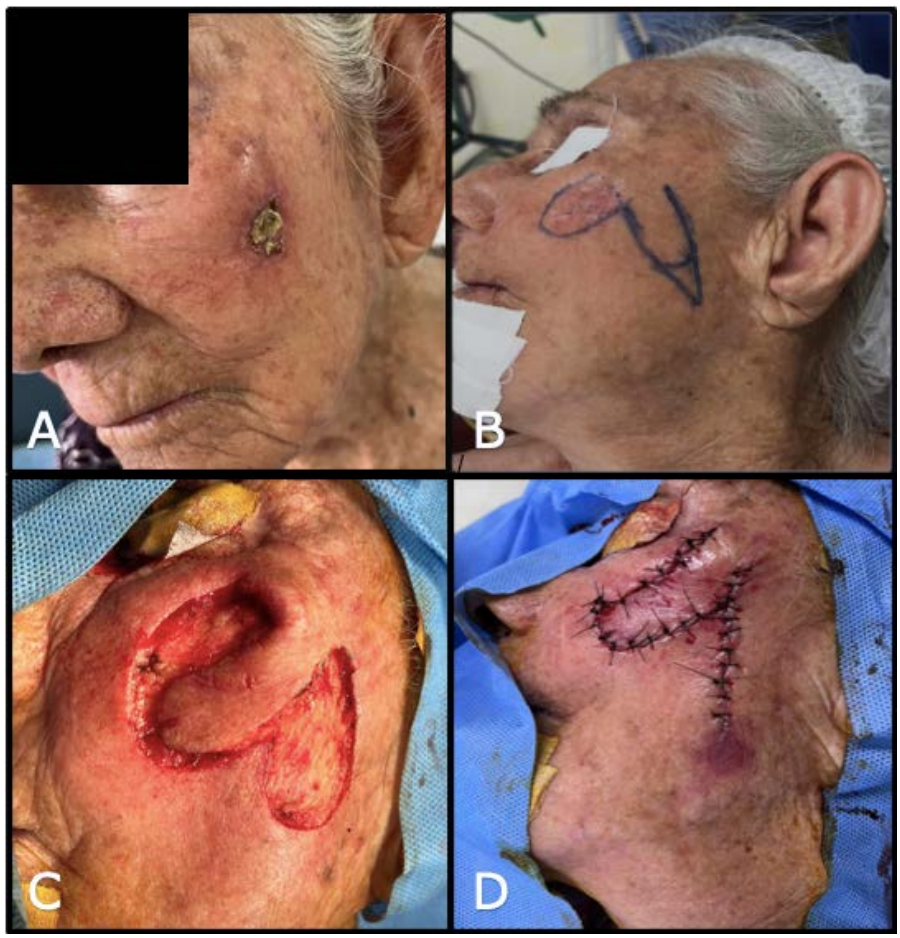

Figure 1. Clinical case 1. Panel A: previous image of the BCC. Panel B: modified transposition flap's design with a single lobe. Panel C: resection of the injury with 1cm margins, in which ample flap's pivot movement is visible. Panel D: final appearance of the flap with tension-free suture.

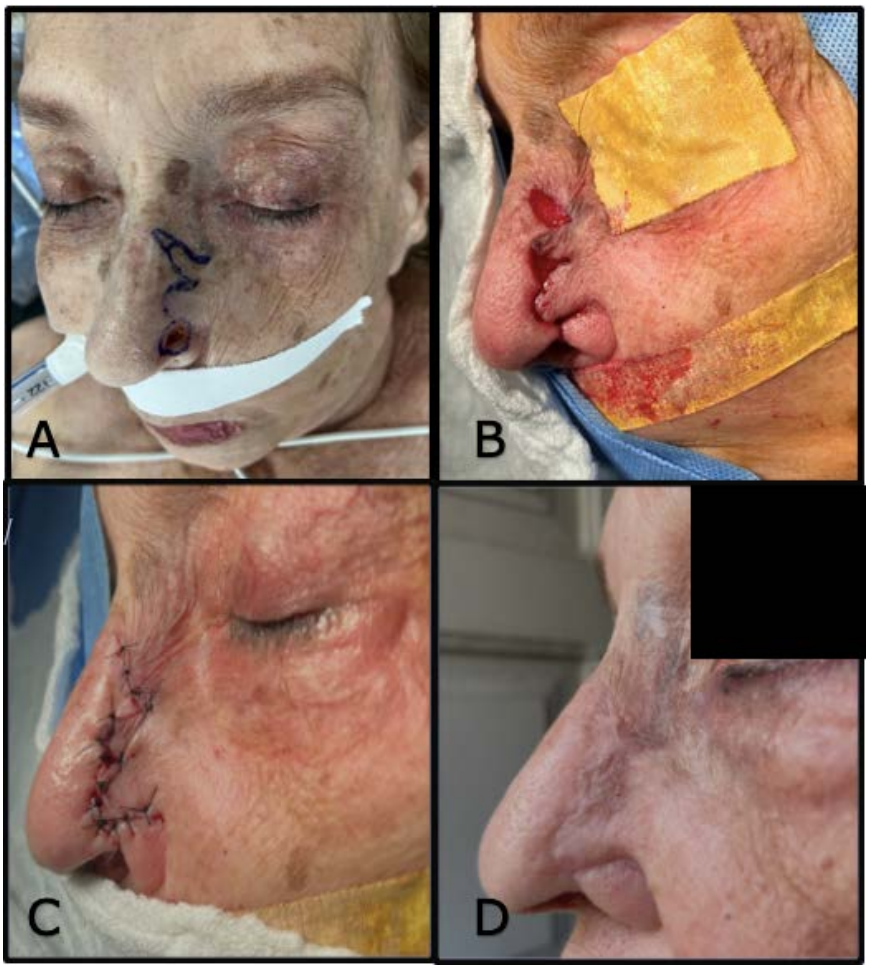

Figure 2. Clinical case 2. Panel A: an injury on the nose's wing very close to the lower edge is visible, as well as clear solar elastosis. Panel B: proof of defect's closure with the confectioned advancement flaps. Panel C: tension-free suture of the edges. Panel D: aesthetic result of the scar 4 months after the postoperative.

Along with the previous BCC diagnosis through biopsy, and due to the injury's location on the nose's wing 5mm off the lower edge, under balanced general anesthesia the flaps with security margins of approximately 7mm were performed ***(Figure 2, panels A and B)***. After ascertaining the non-existence of tension and proper pivot movement, the closure with a non-absorbable monofilament suture 4.0 was performed ***(Figure 2, panel C)***. The diagnosis was confirmed with free margins through pathology. The patient presents proper aesthetic results on the offsite postoperative ***(Figure 2, panel D)***.

DISCUSSION

As a general rule, for a bilobed flap to work properly there must be an appropriate laxity for the wound to be able to be fixed without too much tension. One of the biggest advantages of this flap is the ability to recruit healthy skin from the surroundings without being attached to the injury, which yields better aesthetic and functional results.[5]

The bilobed flap is the best fit for circular defects of the caudal third of the nose besides allowing the surgeon the capability to repair defects using nearby skin without causing major nasal distortions. The main disadvantage is the need to perform two or more curvilinear incisions that are not parallel to the patient's lines of tension – relaxation. This is especially notorious when it is used on patients with overly thick skin with many sebaceous glands or hyperplasia.

This type of flaps is ideal in patients with thin and lax skin, whose laxity can be tested by the surgeon, pinching the nasal skin between the thumb and the index finger.[6]

This flap is known by its excellent application on the nasolabial region, mainly on the nose's wing, its versatility, easy design and excellent aesthetic results once the technique is known and mastered.[4]

For defects of smaller size, rotation, or advancement flaps like bilobed ones are an excellent choice for the patient. For more extensive defects, and the need for full-thickness flaps, the microvascular flaps or thick flaps would be the first options. Many of these more complex flaps possess contradictions such as: previous radioactivity in the area or atherosclerotic diseases of the neck which could interfere with the procedure. In many hospitals around Paraguay, the rotation of advancement flaps

such as the bilobed one prove to be a legitimate choice when it comes to rebuilding defects.[7]

In a retrospective study it was proved that non-microvascular flap reconstructions yield greater satisfaction amongst patients, better tissue coordination, better skin tone and color, as well as providing a shorter hospital stay compared to microvascular reconstructive techniques.8

It is recognized as a suitable flap especially for senior populations or those with some type of severe comorbidity condition alike blood malnutrition or those who report a medical contraindication. It is ideal for smaller defects and good skin laxity. 9

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Ethical considerations: The ethical committee authorized the execution of the present study. Consent of the patients was obtained for the presentation of the case: data, images, and results, with due diligence for anonymity.

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