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## Case Report

PLASTIC SURGERY



**Abstract:** Introduction: Skin cancer is an entity of great prevalence in the Mexican population, the facial region is greatly affected mainly by its high exposure to ultraviolet radiation. Of the most severe and destructive tumors is squamous cell carcinoma and melanoma. Its treatment is resection and adjuvant therapy; however, in the reconstruction of the defect, especially of the cheek and facial center region, the preservation of aesthetic units takes on functional and aesthetic importance.

Case report: a 97-year-old man with a diagnosis of invasive moderately differentiated squamous cell carcinoma with an exophytic growth pattern in which tumor resection was performed with reconstruction using a cervicofacial flap.

Conclusion: the cervicofacial flap is a reliable flap, simple to execute and that provides a good amount of fasciocutaneous tissue for defects in the maxillofacial region. These are an excellent option in patients in whom a microsurgical flap would be technically difficult.

**Keywords:** Facial reconstruction, cervicofacial flap, squamous cell carcinoma.

## Introduction

Skin cancer is one of the most frequent neoplasms in Mexico, each year there are 13,000 new cases, with squamous cell carcinoma, the second most frequent cutaneous neoplasm, after basal cell carcinoma<sup>[1]</sup>, the estimated risk of suffering from it in life it is 7 to 11%<sup>[2]</sup>. Squamous cell carcinoma of the skin, also called squamous cell carcinoma, is a malignancy that originates from epidermal keratinocytes, including those of the oral or genital mucosa<sup>[3]</sup>. A very low percentage of basal cell carcinoma has aggressive behavior, while the squamous cell has a more aggressive behavior, being severe and destructive in the head and neck<sup>[4]</sup>.

Three-dimensional resection with tumor-free margins is the treatment of choice. The reconstruction of the defect produced after the excision of the tumor, with functional and aesthetic acceptable result is a challenge, there being a variety of described methods for the repair of cheek or centrofacial defects that try to respect the aesthetic facial units. In facial skin defects of ample dimensions, the cervicofacial flap can be chosen, a random type flap that provides a skin with color, texture and thickness similar to that of the facial center region, easy to execute and with adequate functional and cosmetic results.

## Case report

97-year-old male patient, referred to our unit with a lesion in eyelid region and maxilla, exophytic of about 10 cm and diagnosed with epidermoid carcinoma (**Figure 1**). The examination revealed an exophytic, warty lesion measuring approximately 10 x 5 cm with an irregular border and blood crusts that prevented palpebral closure. Biopsy of the lesion was performed, reporting moderately differentiated squamous cell carcinoma. The plastic surgery service decides to perform tumor resection with defect reconstruction with a cervicofacial flap and reconstruction of the eyelid. (**Figure 2**). The postoperative findings were exophytic tumor of 10 x 5 x 3 right eyelid with right eye with tumor infiltration. The histopathological report of the surgical piece was of moderately differentiated invasive squamous cell carcinoma with exophytic growth pattern, diffuse angiolymphatic permeability, lateral surgical limits are shown to be free of injury. In the immediate postoperative period, an adequate cosmetic result is observed with cutaneous coverage similar to that of the surrounding skin (**Figure 3A**).

Good results were obtained with an inconspicuous scar at the limits of the aesthetic unit evaluated postoperatively in a period of 4 weeks

From the Department of General Surgery at Regional Hospital of High Specialty of Oaxaca. Oaxaca, Mexico. Received on October 14, 2020. Accepted on October 19, 2020. Published on October 21, 2020.

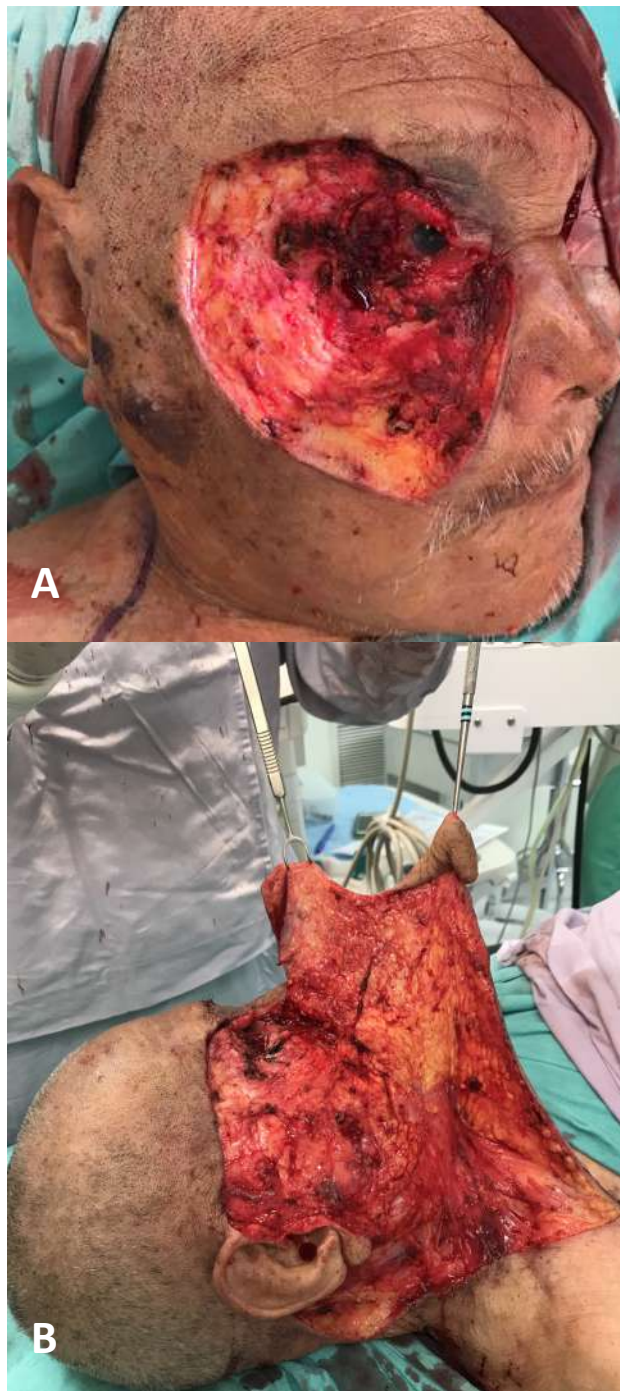


**Figure 1.** Preoperative. 10 x 5 cm irregular squamous cell carcinoma, encompassing the aesthetic units of the eyelid and cheek

(**Figure 3B**). The histopathological report of the surgical specimen was of moderately differentiated invasive squamous cell carcinoma with an exophytic growth pattern, diffuse angiolymphatic permeability, lateral surgical limits are free of lesions.

### Discussion

In patients with tumor lesions and skin involvement, the fundamental principle consists of R0 tumor resection, however, one of the most important challenges is the closure of defects with a diameter greater than 5 cm in the facial region and for the reconstruction of these, we must meet three fundamental principles: adjust to oncological principles in resection, preserve function and aesthetics<sup>[5]</sup>. The face can be divided into units and aesthetic subunits initially described by Gonzalez-Ulloa in 1956, then by Millard in 1966, and then in 1985 by Burget and Menick, who defined these units in detail. The most relevant concept is that the face can be classified into aesthetic units, independent of each other: frontal, temporal, genian, nasal, periorbital and chin. Within each unit the skin is uniform in terms of texture, color, thickness and mobility<sup>[6]</sup>. Therefore, if the incisions are made in the limits of these areas, the scars will be almost imperceptible and the aesthetic result will be satisfactory, since no contour, thickness or color changes are appreciated. As these classic aesthetic units are independent of each other, they



**Figure 2. A.** Preoperative. 10 x 5 cm irregular squamous cell carcinoma, encompassing the aesthetic units of the eyelid and cheek. **B.** Total elevation of the flap

must be repaired independently, not using the same flap to repair two different units<sup>[7]</sup>. By having the facial cervical flap a random pattern and being irrigated by the system of the facial and perforating artery of the superficial aponeurotic muscle system (SMAS)<sup>[8]</sup>, it represents an easy and safe option of skin coverage in extensive defects in the facial region. It is traditionally performed through an incision that surrounds the aesthetic unit of the cheek in its union with the aesthetic unit of the lower eyelid, extending to the preauricular region and extending vertically even



**Figure 3. A.** Immediate postoperative appearance after two-plane closure and eyelid reconstruction. **B.** Patient 4 weeks after surgery.

to the neck, according to the size of the defect to be reconstructed. get to cover facial and cheek defects of up to 10 cm in diameter. In elderly patients, redundant

lax skin of the cheek that is transferred to cover the defect is advantageous<sup>[9]</sup>. As a general rule, the ratio of base length to facial level, which has great vascularization, can be 3: 1 while in the trunk it will be 2: 1 or even 1: 1. The most prominent flap donor areas on the face are: the glabellar, paranasal, nasogenian, cervical labiomentionian and submental<sup>[10]</sup>. For this reason it is that the cervicofacial flap represents a valid option in this patient due to the laxity of the skin, the great cutaneous defect secondary to the three-dimensional resection, to the excellent cosmetic results that it gives to preserve the aesthetic facial units, to the good thickness which provides cutaneous coverage of the facial structures and the technical practicality of their execution.

### Conclusion

Cervicofacial flaps are a reliable therapeutic option, simple to execute and that provide a good amount of fasciocutaneous tissue for defects in the maxillofacial region. These flaps are an excellent option in patients in whom a microvascular flap would be technically difficult. When performing facial reconstruction, the size, location, damaged structures and surrounding skin availability should be considered when reconstructing the defects. The age of the patient, concomitant disease and cosmetic results are also factors to consider in the reconstruction.

### Conflicts of interests

None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.

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Alan Barker Antonio  
General Surgery Department  
Regional Hospital of High Specialty of Oaxaca  
Oaxaca, Mexico  
drbarker91@gmail.com