

# Mustardé Flap As A Reconstructive Option For The Approach To Eye Basal Cell Carcinoma: A Case Report

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## Abstract

We report the case of a 76-year-old man with a right eye basal cell carcinoma. Resection was performed on a tumor of the right lower eyelid (3 cm in diameter) and right external canthus (1cm in diameter) and biopsy revealed clear margins. A temporal incision was made in the anteroposterior sense, beginning in the external canthus and addressed inferiorly to the preauricular fold and upper neck. The Mustardé flap was elevated in the supra-SMAS (Superficial musculoaponeurotic system) plane until coverage of previous faulty interventions. The full-thickness defect after tumor excision was covered by nasal septal chondromucosal graft and right mucosal septum attached with cartilage and mucosa. The tarsal plate was bound to the external canthus and the temporal fascia was dissected to rotate the flap and fix the notarial edge for adequate suspension.

**Keywords:** Mustardé flap • Eye basal cell carcinoma • Reconstructive surgery • Case report

## Introduction

Basal cell carcinoma is the most common eyelid malignant lesion [1]. There are eyelid lesions that by their nature, surgical resection regularly outcome in large full-thickness defects [2]. That is why surgical reconstruction is challenging. Mustardé flap is a technique used for the upper lid defects since 1971 and is still used to keep the lid architecture functional [3]. Here we show a case report of a reconstruction technique that involves the reconstruction of two lesions in the right lower eyelid and right external canthus.

## Case Report

A 76-year-old man presented to the clinic declaring 1-year history of protrusion, induration in right lower eyelid without pain, and two months ago an accelerated growth of a lesion. On exploration, it is observed an ulcerated, bleeding lesion in right lower eyelid of 3 cm in diameter with aqueous secretion and malodor (figure 1a). Another lesion was observed in the right external canthus of 1 cm in diameter (figure 1b).



Figure 1. 1a) right lower eyelid lesion, 1b) External right canthus lesion.

Biopsy revealed a basal cell carcinoma. We performed a full-thickness surgical resection of the two lesions with a margin of 5 mm, extracting the whole right lower eyelid and external right canthus. The transpiratory biopsy clear margins on the underside (figure 2).

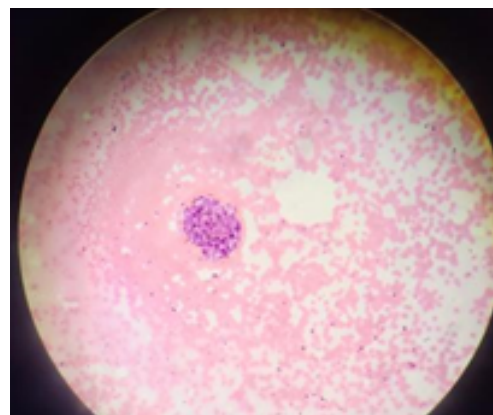


Figure 2. Histology of eyelid biopsy.

A temporal incision was made in the anteroposterior sense, beginning in the external canthus and addressed inferiorly to the preauricular fold and upper neck (figure 3a). The Mustardé flap was elevated in the supra-SMAS (superficial musculoaponeurotic system) plane until coverage of previous faulty interventions. The full-thickness defect after tumor excision was covered by nasal septal chondromucosal graft and right mucosal septum attached with cartilage and mucosa. The tarsal plate was bound to the external canthus and the temporal fascia was dissected to rotate the flap and fix the notarial edge for adequate suspension (figure 3b,3c).

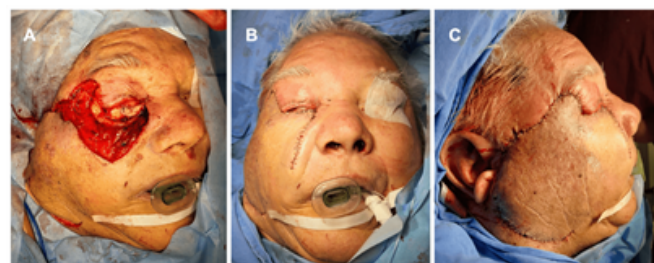


Figure 3. 3a) Tumor resection, 3b, 3c) Closure with Mustardé flap.

One month follow up shown in [figure 4].



Figure 4. One month postoperative follow up.

## Discussion

Surgical resection is the principal treatment for malignant tumors that often outcome in large full-thickness defects. Reconstruction depends on the size of the defect and the different techniques aim to achieve good aesthetic quality and acceptable sequelae at the donor site [4]. Flaps and grafts are commonly used to repair defects, nonetheless, grafts are associated with negative outcomes such as indentation and changes in color and texture of original tissue, while flaps' benefits are the preservation of vascular supply and the redistribution of tension lines around the defects [5].

Within the limitations of Mustardé flap, is the vascular integrity in patients with certain characteristics. For example, smokers and patients with scar tissue from previous surgeries compromise the blood supply to the flap [5]. Another limitation is the risk of the confirmation of a residual tumor and the requirement to cut the pedicle of the flap [3]. Fortunately, in this case, report, there was no residual tumor. An issue observed in our case is that the beard of the patient moved from the preauricular area to the cheek (Fig 4B). Our procedure expands the opportunities to increase the size of the Mustardé flap, making it an excellent strategy for basal cell carcinoma in the eye region.

## Conclusion

The current case shows the reconstruction of two lesions and illustrates that the Mustardé flap is suitable to reconstruct severe eye multi-lesions, preserving vascularity, color, and texture of original tissue. Although the possible treatments for basal cell carcinoma in the eyelid must be discussed for each particular case, the Mustardé flap has excellent results. However, some physicians are not comfortable with the use of large flaps, thus it is important to describe successful cases that encourage them to use this technique to keep the lid architecture.

## Abbreviations List

SMAS: Superficial musculoaponeurotic system

## Declarations

- Ethics approval and consent to participate: Autograph consent was obtained from the patient for the presentation and publication of her case.
- Consent for publication: Written informed consent was obtained from the patient for publication of this case report and any accompanying images.
- A copy of the written consent is available for review by the Editor-in-Chief of this journal.

- Availability of data and materials: All data provided are available in the medical file located within the "Hospital Valentin Gomez Farias del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado", in Zapopan Jalisco, Mexico.
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