

# Reconstruction of the lower eyelid using the modified Fricker technique

Reconstrução da pálpebra inferior pela técnica de Fricker modificada

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## ABSTRACT

The reconstruction of the eyelid is a considerable challenge for surgeons due to the fact that it is a delicate organ of the utmost importance. The procedure is indicated in defects of congenital origin, post-trauma, or neoplasia. There are many techniques described in the literature. The authors report a case of a female patient bearer of xeroderma pigmentosum with extensive basal cell carcinoma in the lower right eyelid, who underwent tumor resection and reconstruction of the lower eyelid using the modified Fricker technique with excellent functional and aesthetic result.

Keywords: carcinoma, basal cell; eyelids; surgical flaps

## RESUMO

*A reconstrução da pálpebra é um grande desafio para os cirurgiões por se tratar de órgão delicado e de extrema importância. Está indicada em defeitos de origem congênita, pós-trauma ou neoplasias. Existem várias técnicas descritas na literatura. Relata-se o caso de uma paciente portadora de xeroderma pigmentoso com carcinoma basocelular extenso na pálpebra inferior direita, submetida à ressecção do tumor e reconstrução da pálpebra inferior pela técnica de Fricker modificada com excelente resultado funcional e estético.*

*Palavras-chave: carcinoma basocelular; pálpebras; retalhos cirúrgicos*

## Case Reports

### Authors:

Aline Soares de Sousa<sup>1</sup>  
Osório Alves Corrêa de Castro Lara<sup>2</sup>  
Ed Wilson Tsuneo Roscoe<sup>3</sup>

- <sup>1</sup> First-year Graduate Dermatology Student, Complexo Hospitalar Padre Bento de Guarulhos – Guarulhos (SP), Brazil.
- <sup>2</sup> Second-year Graduate Dermatology Student, Complexo Hospitalar Padre Bento de Guarulhos – Guarulhos (SP), Brazil.
- <sup>3</sup> Plastic Surgeon from the Santa Casa de Misericórdia de São Paulo – São Paulo (SP), Brazil. MSc in Health Sciences from Hospital do Servidor Público Estadual (HSPE) – São Paulo (SP), Brazil. Surgical Oncology Preceptor, Dermatology Department, Complexo Hospitalar Padre Bento de Guarulhos – Guarulhos (SP), Brazil.

### Correspondence:

Aline Soares de Souza  
Rua Terceiro-Sargento Alcides de Oliveira  
101, apto 31 B – Vila Capitão Rabelo –  
07050-030 – Guarulhos – SP  
E-mail: [dra.aliness@hotmail.com](mailto:dra.aliness@hotmail.com)

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## INTRODUCTION

The eyelid is a complex structure with an important role in protecting the eyeball against injury and other damage, in addition to being responsible for the secretion, distribution, and drainage of the lacrimal film.<sup>1,2</sup> Eyelids can be affected by birth defects, trauma and tumors, and basal cell carcinoma (BCC) – the latter being the most frequent, especially in fair-skinned people and in those exposed to ultraviolet radiation. The incidence of this tumor in the eyelid area has the following distribution: 70% in the lower eyelid, 20% in the medial canthus, 7% in the upper eyelid, and 3% in the lateral canthus. The treatment depends on the size and location of the lesion, and the surgeon's experience.<sup>3,4</sup>

The present paper is aimed at demonstrating the reconstruction of the lower eyelid using the modified Fricker method, with good aesthetic and functional outcomes in a patient with BCC that affected around 50% of the lower eyelid.

## CASE REPORT

A 48-year-old female patient with a history of xeroderma pigmentosum and multiple resections of BCCs and squamous cell carcinomas. The dermatological examination evidenced a pigmented nodular lesion with elevated and pearly borders, measuring roughly two centimeters in diameter and affecting about 50% of the right lower eyelid. (Figure 1) Once the diagnosis of pigmented BCC was confirmed through an incisional biopsy, a decision was made to resect the tumor and reconstruct the lower eyelid using the modified Fricker method.

After the surgical marking, antisepsis with polyvinylpyrrolidone-iodine (PVPI) and local anesthesia using the tumescent technique with 0.5% lidocaine, the tumor was resected with 0.5 cm safety margins. (Figure 2)

Due to the extent of the defect, the reconstruction of the lower eyelid was performed using the modified Fricker method with a medial pedicle. (Figures 3 to 5)

After the autonomization of the flap, the pedicle resection was performed in a second surgical procedure. (Figure 6)



**FIGURE 2:** Defect in the eyelid after tumor resection with a 0.5 cm safety margin



**FIGURE 3:** Preparation of the modified Fricker flap with a medial pedicle in the upper right eyelid



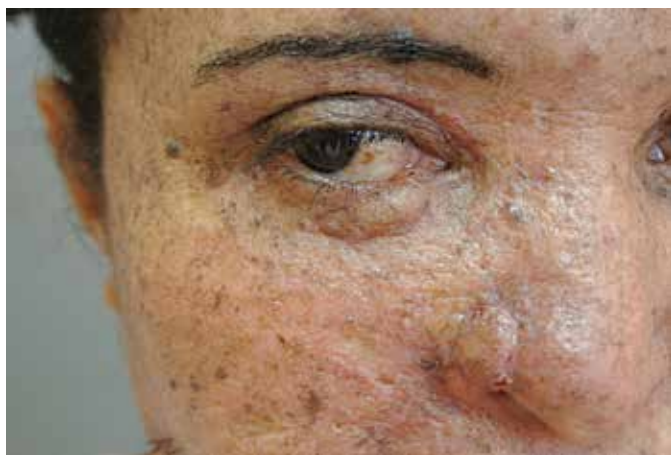
**FIGURE 1:** BCC of approximately 2 cm in the lower right eyelid



**FIGURE 4:** Transposition of the flap to the defect area



**FIGURE 5:** Suture of the flap to the lower eyelid



**FIGURE 6:** Final result after autonomization of the flap and resection of the pedicle

## DISCUSSION

Skin flaps are indicated when it is not possible to carry out a primary closure of the lesion. In the lower eyelid area, direct closure is only possible when the defect affects up to 30% of the eyelid.<sup>1</sup> In the present case, the resulting defect covered around 50% of the right lower eyelid, requiring the performance of a skin flap. Several flaps are described for correcting this deformity, and the authors chose the modified Fricker technique.

The Fricker technique was first described in 1829 by Johann Karl Fricke as a temporal flap in the supraorbital area of the frontal region and is used to reconstruct the lower and upper eyelids, and the lateral canthus.<sup>4-6</sup> The authors used a myocutaneous transposition flap with a medial pedicle, composed of skin and the pre-septal portion of the orbicularis muscle of the upper eyelid. The pedicle can be medial or lateral to the palpebral aperture, depending on the location of the defect. This type of flap offers a good level of thickness for the reconstructed eyelid and may require a second surgical event for the resection of the pedicle following its autonomization (usually 21 days after the first surgery).

This flap is easy to perform and provides excellent aesthetic results and low complication rates.<sup>1</sup>●

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