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Case Report

# Reconstruction by ALT Composite Flap of the Orbit and Periorbita, Due To Tumor Enucleation "Case Report".

**Daniel Pichardo Esquivel[1], Jonathan Emmanuel Ponce Hernández[2], Hector Adolfo Morales Yépez[3], Eric Contreras Sibaja[4], Luis Miguel Hernández García[5], Paúl Robledo Madrid[6], Rodrigo Banegas Ruiz[7], Nadia Andrea Rodriguez García[8], Miguel Ángel Canseco Fuentes[8], Victoria E. Viurcos-Sanabria[8], Erik A. Torre-Anaya[9*]**

[1]Physician attached to the plastic surgery service of the Hospital Central Militar, Mexico

[2]Chief of the Academic Coordination Department of the Hospital Central Militar, Mexico

[3]Chief of the Plastic Surgery Service of the Hospital Central Militar, Mexico

[4]Chief of the Burn Unit of the Hospital Central Militar, Mexico

[5]Physician attached to the plastic surgery service of the Central Hospital, Mexico

[6]Fourth year plastic surgery resident at the Luis Guillermo Ibarra Ibarra National Rehabilitation Institute, Mexico

[7]Responsible researcher Physician attached to the traumatology service of the Luis Guillermo Ibarra Ibarra Ibarra National Institute of Rehabilitation, Mexico

[8]Member in training for plastic surgery, Mexico

[9]Master student at the Universidad Tecnológica de México, fellowship, Mexico

[*]**Corresponding author**: Erik A. Torre-Anaya, Universidad Tecnológica de México, Mexico City, Mexico

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## Abstract

**Introduction**: Presentation of a case of reconstruction of orbit and periorbita due to tumor enucleation with extension to the skin, using composite ALT flap, with the purpose of having a coverage of the lesion site, with adequate vascularity, decreasing the comorbidities of the donor site. This is a 74-year-old female patient with surgical wound after enucleation of squamous cell tumor with extension to the skin; referred for functional reconstruction by ALT composite myocutaneous flap. **Result**: adequate coverage and volume of the reconstructed area, favorable bed and vascularization of the flap, expected result from the first surgical act. **Conclusion**: the composite ALT flap has the advantage of giving adequate coverage and volume if it is removed with its muscular portion.

**Keywords**: ALT composite; Enucleation; Reconstruction.

**Abbreviations**: ALT: Anterolateral

## Introduction

Presentation of a case of reconstruction of the orbit and periorbita by tumor enucleation with extension to the skin (Image 1). In oncologic reconstruction, the tumor lineage, the type of resection and the margins must be considered. In this way, a panorama of functional and cosmetic requirements is created, which will help us to select the technique with which to achieve the best result and improve the patient's quality of life [1]:

1. Planning the reconstructive procedure in conjunction with the oncologic surgeon.

2. Reconstruction with morpho-functional cosmetic units, especially in facial defects.

3. Avoid using muscle when the defect is only cutaneous and volume is not desired.

4. Choose tissue with similar characteristics to that of the defect site.

5. Achieve the best result with a single procedure.

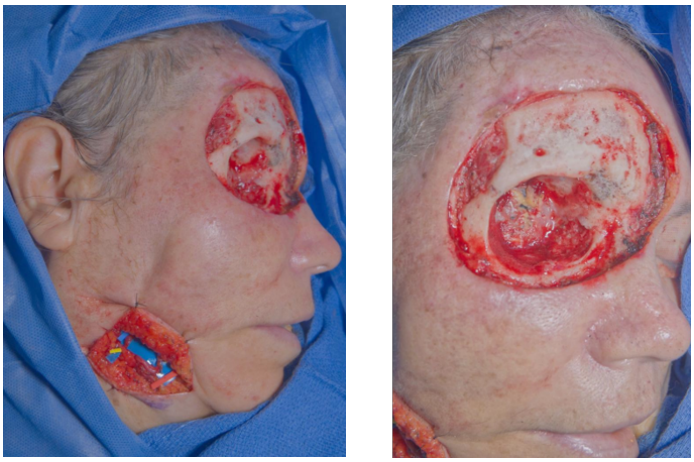

**Figure 1**: Post-enucleation lesion of the right orbit with extension to the skin.

The main objectives are to provide adequate coverage to deep tissues, especially bone, vascular and nervous structures that have been exposed, as well as to place healthy tissue with adequate vascularity to avoid injury by adjuvant treatment or the chronicity of the disease [2]; that is, we must ensure adequate skin coverage with defined vascular pattern, this in order to receive radiotherapy, chemotherapy and hormone therapy of the reconstruction area.

There are different types of flaps for reconstruction secondary to tumor resections. The choice of technique will depend on the type of lesion; extension and histology present [3]. The composite anterolateral flap (ALT) consists of including muscle, fascia or nerve [4]. This flap has the particularity and reliability of including intact the entire descending branch of the lateral femoral circumflex artery, and thus serve as a flow through flap, this has as indications and main utility, traumatic injuries of the extremities with vascular and cutaneous segmental loss; in chronic wounds where soft tissue coverage is required and there is a high degree of stenosis in the recipient vessel [5]. The anterolateral lateral flap (ALT) is obtained from the descending branch of the lateral femoral circumflex artery, which runs between the vastus lateralis and rectus femoris muscles. The venous drainage of the ALT flap depends on 2 veins that accompany the descending artery of the lateral femoral circumflex artery [6]. According to [7] the advantages and versatility are: the inclusion of different types of tissue in different combinations, reliable vascular anatomy, large extension cutaneous island, long vascular pedicle with adequate caliber, minimal morbidity at the donor site, and the possibility of implementing two surgical teams operating simultaneously.

### Case Report

74-year-old female patient with a history of systemic arterial hypertension and surgical wound following enucleation of squamous cell tumor with extension to the skin; referred by the oncology service for functional reconstruction using ALT myocutaneous flap composed with vastus lateralis muscle (Figure 2).

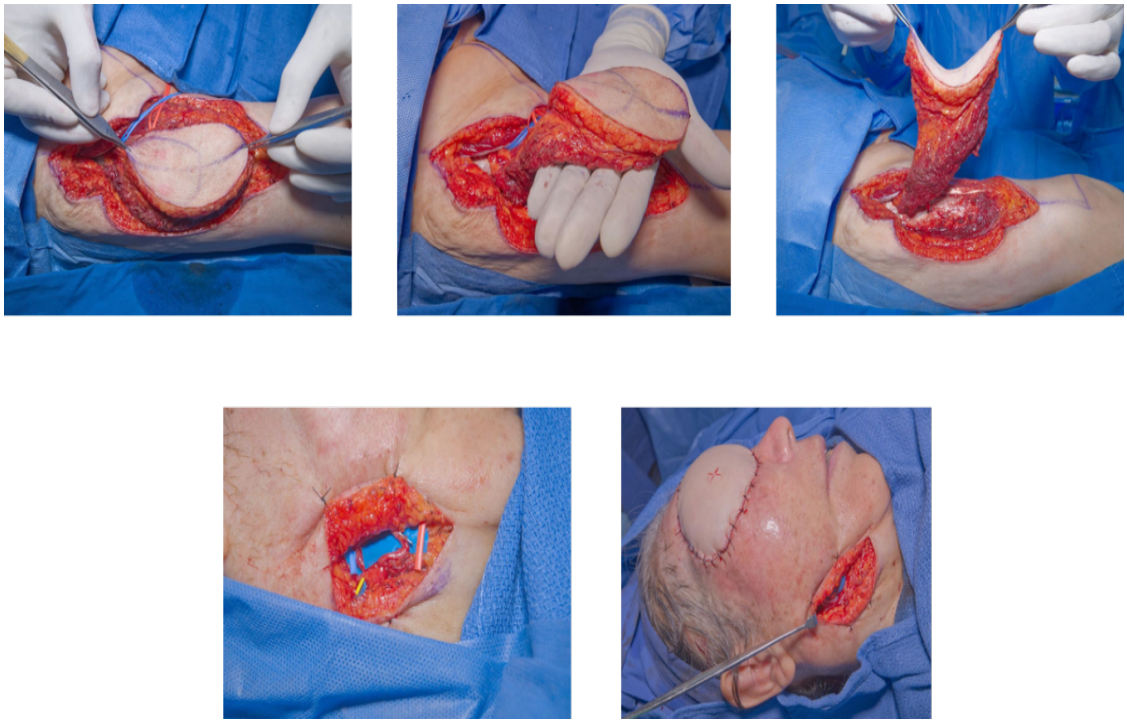

**Image 2**: Follow-up of the preparation of the myocutaneous flap of the anterolateral region of the thigh and the muscle is the vastus lateralis, as well as the search for receptor vessels (facial artery and vein to provide vascular supply to the flap.

Transoperative findings showed a lesion with free borders, an active bed and adequate integration of the flap.

Physical examination after reconstruction showed ALT flap with adequate coloration, capillary filling of 2 seconds, surgical edges with adequate healing process (Figure 3).

**Figure 3**: Final aspect

Referred for outpatient consultation.

## Discussion

**Final Result**: adequate coverage and volume of the reconstructed area [4].

Bed and vascularization of the favorable flap Healthy tissue suitable to support radiotherapy, chemotherapy, immunotherapy and hormone therapy in the reconstruction area. Achieving the best expected result in the first surgical, reconstructive and aesthetic intervention according to the main objectives of reconstruction in head and neck oncological conditions [2].

## Conclusions

The composite ALT flap has the advantage of providing adequate coverage and volume if it is removed with its muscular portion.

Oncologic reconstruction criteria recommend that randomized vascular pattern grafts and flaps should be avoided, since they are not stable for radiotherapy, chemotherapy, immunotherapy, hormone therapy, and much less, to surgical revisions in case of recurrence.

The most biologically stable reconstruction should be chosen in order to be able to intervene through the same reconstruction without risk of loss or necrosis in case of tumor recurrence.

In oncological reconstructions, the most stable, economical, safe and aesthetically pleasing option is microsurgery.

It cannot be demonstrated that microsurgical reconstruction is contraindicated in patients with concomitant diseases or in geriatric patients; both by the results observed in our clinical case and in the literature consulted.

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