

MAKING DECISIONS REGARDING LANGUAGE RECONSTRUCTION REVIEW OF THE TOPIC AND CLINICAL CASE PRESENTATION

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Abstract: Introduction: Language reconstruction is challenging, due to its important role in articulating words, deglucing and protecting respiratory pathways. The tongue is a common site in the oral cavity for primary cancers, with a high incidence due to smoking and alcohol consumption. Any reconstructive attempt must restore volume and mobility so that the tongue is functional. Goal. Clinical case presentation and bibliographic review regarding decision making regarding the selection of language and oral cavity reconstructive options. Material and Methods. Presentation of a clinical case of microsurgical reconstruction with musculocutaneous ALT collar, of a defect in the floor of the mouth and tongue secondary to resection of squamous cell carcinoma. Carried out at the Plastic Surgery and Microsurgery Service of Hospital Pasteur in June 2023. Bibliographic review using the Pubmed search engine. Using MESH terms: Platic Surgery; Tongue; Glossectomy; Microsurgery. Results: A clinical case is presented and a review of the topic is carried out while selecting reconstructive options. Conclusions. A clinical case is presented and the review carried out seeks to optimize treatment selection based on different variables such as the size of the language defect and the effect of adyacentesis. As well as the appropriate collation design that must be used in each type of tongue reconstruction to provide good predictable functional and aesthetic results, based on evidence.

INTRODUCTION

The tongue is a common site in the oral cavity for primary cancers, with a high incidence due to smoking and alcohol consumption. Tongue cancer is the most frequent of oral cavity cancers in the western population¹.

The oncological resection of the tongue is an operation with great morbidity that can drastically deteriorate the function of the tongue and the deglucination.^{2,3}

The reconstruction of the language is challenging, due to its important role in the articulation of the word, the deglucation and the protection of the respiratory pathways. Any reconstructive attempt must restore volume and mobility so that the tongue is functional.¹

The most recent experience suggests that functional results have improved, especially with the continued refinement of microvascular reconstruction of the tongue with free flap.^{4,5}

However, the literature correlating results that control both the range of possible glossectomy defects and the specific collegium used for reconstruction is relatively scarce.^{6,7}

The objective of this work is the clinical case presentation and bibliographic review regarding decision making regarding the selection of language and oral cavity reconstructive options.

MATERIAL AND METHODS

A bibliographic review was carried out using the Pubmed search engine. Using MESH terms: Platic Surgery; Tongue; Glossectomy; Microsurgery.

The majority of consulted authors agree that there are multiple variables when considering the reconstructive option, such as patient factors, bearing in mind that the majority of patients with oral care cancers generally present associated cardiovascular and/or respiratory pathologies smoking and alcoholism because of which they could not be candidates for a micro-surgical reconstruction¹.

One of the most relevant factors in the selection of reconstructive options is the size of the defect. Different classifications were

created for language defects, based on which authors proposed a certain reconstruction for each one.

A frequent classification is in Hemiglossectomies, Subtotal Glossectomies and Total Glossectomies ^{8,9}

Cheng proposes classifying them into three groups. In group 1: Hemiglossectomies (Defects of up to 50%), for those who propose as the best option thin skin collars with flexible and mobile skin (such as the radial antibrachial collar or the chin collar, the cubital antibrachial collar, the anterolateral muscle collar). Group 2 Subtotal Glossectomy, which is in turn subdivided into A. (Defects of up to 66%), which suggests reconstruction with thickening of the voluminous skin (ALT fasciocutaneous or musculocutaneous of the rectus abdominis), and B. (Defects of up to 75%) for those plants using voluminous musculocutaneous tissue (ALT musculocutaneous or rectus abdominis musculocutaneous). And finally, group 3 (Total Glossectomy), for which he proposes reconstruction with a large musculocutaneous tissue (with adequate volume for swallowing, like the pentagonal musculocutaneous ALT)⁶

This classification resembles the classification of the defect and the reconstructive options proposed by Chang. That places your analysis on which major defects imply a worse functional prognosis (Articulación de palabra y deglución. Opting for thin and flexible collars for minor defects (Partials or Hemiglossectomies), and bulky collars for major defects (Subtotales-Totals).⁷

Furthermore, Chang adds the possible advantage of using sensitized collations, however, the results obtained regarding this item in the account with statistically significant values.⁷

Clinical Case Presentation Male patient, 53 years old, with a personal history of heavy smoking and high blood pressure. Presenting

squamous cell carcinoma of the floor of the mouth and tongue.

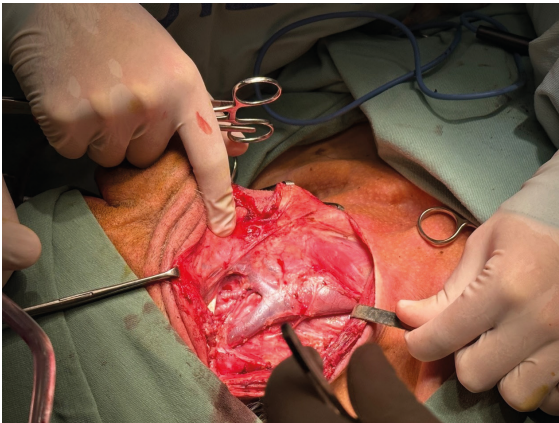
Oncological resection and bilateral cervical ganglion vacancy were carried out by the otorhinolaryngology service and mouth and tongue floor reconstruction and microsurgical reconstruction with ALT musculocutaneous flap, carried out by the Plastic Surgery and Microsurgery Service of Hospital Pasteur in June 2023. Oncological resection was carried out through transoral approach, Lip-split incision with mandibulotomy and tongue release.



Associated with bilateral level V cervical lymph node vacancy through an ascending Paul André incision following the anterior edge of the SCM up to approximately the mastoids. (Figure 1).



Planning with a mold of Osteosynthesis plates prior to mandibulotomy (Figure 2)



Identification of receptor vessels in the carotid region (Tirolinguofacial venous trunk and Facial artery. (Figure 3)



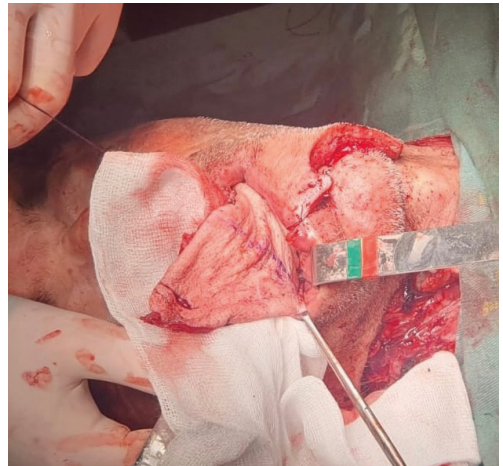
Assessment of remaining floor-of-mouth defect and hemiglossectomy (Figure 4).



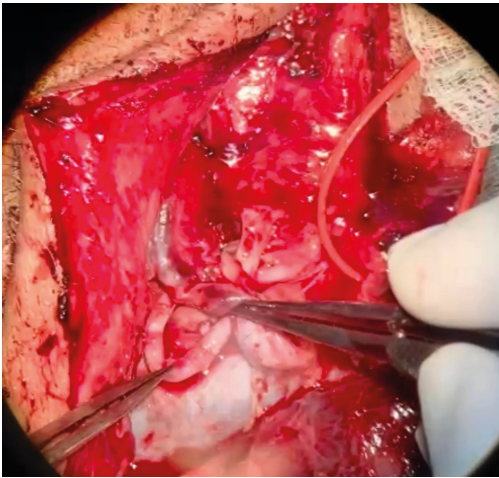
Planning and design of the ALT musculocutaneous flap of the right leg was carried out, identification with Doppler and marking of main perforating areas (Figure 5).



Production of an ALT flap, identification of the descending branch of the lateral circumflex femoral artery and satellite veins. (Figure 6).



Neck insertion using the fasciocutaneous sector for the reconstruction of the hemiglossectomy and muscular sector for the reconstruction of floor-of-mouth defect. (Figure 7)



Microsurgical anastomosis to recipient vessels using 10.0 irrisorbable monofilament hilum. (Figure 8)

DISCUSSION

The bibliography consulted analyzes multiple variables for decision making regarding language reconstruction.

Microsurgical techniques have shown better results regarding functional recovery. The characteristics of the defect to be reconstructed stand out as one of the determining factors in the selection of the reconstructive option.

RESULTS

The majority of authors coincide in the need to reconstruct major defects by 50% to ensure the deglución and articulation functions of the word. Selecting thin and flexible collars for smaller defects and voluminous collars for larger defects.

Regarding the clinical case presented, the post-operative result was demonstrated within a month, showing correct coverage of the defect in the floor of the mouth, with an adequate deglucination function that allows habitual oral feeding and with an acceptable word articulation function. There are no complications in the flap or in the donor area. (Figures 9-11).



CONCLUSIONS

A clinical case is presented and the review carried out seeks to optimize treatment selection based on different variables such as the size of the language defect and the effect of adyacentesis. As well as the appropriate collation design that must be used in each type of tongue reconstruction to provide good predictable functional and aesthetic results, based on evidence.

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