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Maxillofacial Surgery

The Tongue Flap and Reconstruction of the Oral Defect: Our Experience

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Abstract **Case Report**

The tongue flap has proven to be a reliable and easily obtained local flap in oral defects repair surgery. We have different types of the tongue flap; lateral tongue flap with proximal pedicle, and with distal pedicle; dorsal tongue flap anterior and posterior; ventral tongue flap. The use of the tongue flap requires a first intervention, coverage of substance loss; and in the second intervention, flap withdrawal.

Keywords: tongue flap, surgery, distal pedicle.

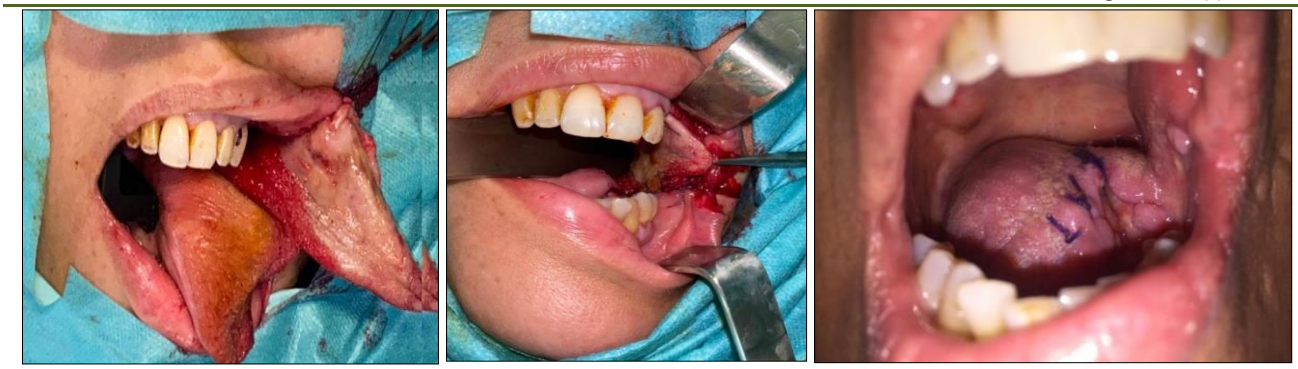
INTRODUCTION

Repairing the loss of oral defect can be difficult due to the different characteristics of the area, the importance of preserving anatomy and function, and the shortage of available donors. The location and size of the loss of substance guide the surgeon and dictate what to do. Among the options available, and the therapeutic arsenal at its disposal, we have the tongue flap.

CASE REPORT

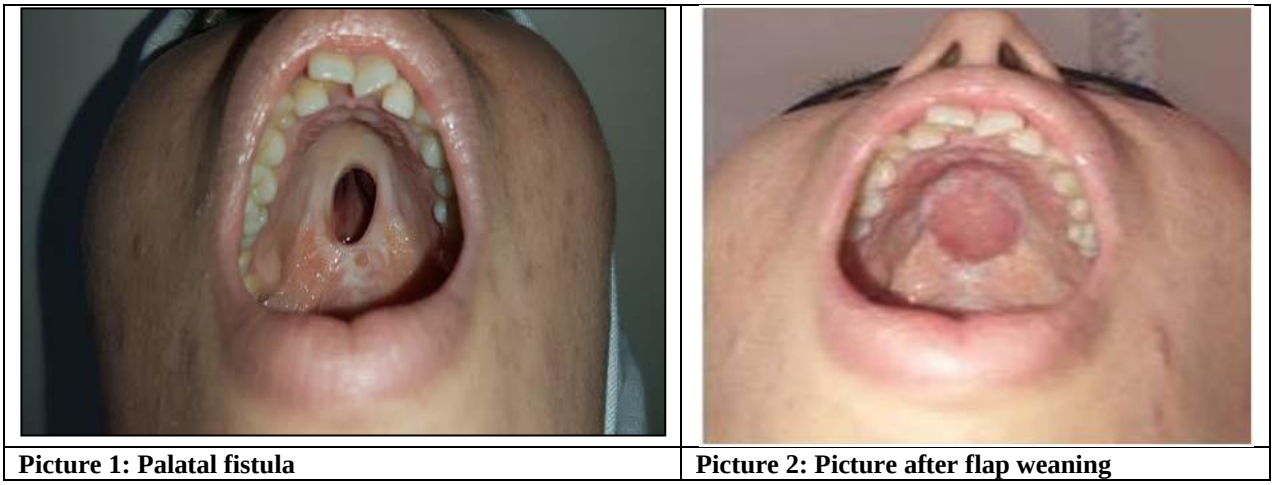
First case: Patient 35 years old, who presented with squamous cell carcinoma at the lip corner, benefiting from tumor excision and reconstruction by marginal lingual flap with proximal pedicle.

Picture 1: Squamous cell carcinoma at the lip corner



Picture 2: Reconstruction by the tongue flap with a proximal pedicle (a) (b) Result after 03 weeks (c)

2nd case: patient presented with palatal fistula, benefiting of reconstruction by flap of dorsal tongue with anterior base



Picture 1: Palatal fistula	**Picture 2: Picture after flap weaning**

- 3rd case: 45-year-old patient, with epidermis Kc, benefiting from tumor removal whose reconstruction was made by flap of ventral tongue

Picture 1: Inferior squamous cell carcinoma

Picture 2: Loss of pelvi-mandibular substance reconstructed by flap of ventral tongue

DISCUSSION

The use of a tongue flap was probably first described by Guerrero-Santos and Altamira no, but during the initial period, surgeons as well as patients were reluctant to use tongue scraps, for fear that they would cause considerable interference with the functioning of the language. The main techniques:

a. Lateral Tongue Flap:

There are 2 types of flap:

- Lateral tongue flap with proximal pedicle: flap mainly vascular zed by the anastomosis of the dorsal arteries

It is a good option for coverage of large oronasal fistulas and Loss of substance pharyngeal and labial

- Lateral tongue flap with distal pedicle: flap vascular zed by anastomosis of ranine arteries

It is a good option for coverage of posterior or nasal fistulas

b. Dorsal Tongue Flap:

- **Anterior Dorsal Tongue Flap:**

It is peticulated on the anterior tongue attachments, based on the rich sub mucosal plexus of the dorsal vessels, is considered the most versatile of all tongue shreds given its relative mobility, it is reliable when its blood supply is preserved.

- **Posterior Dorsal Tongue Flap:**

Posterior tongue lamellae have a stronger blood supply, as arterial supply feeds the tongue from back to front, which increases their predictability in theory. However, their use may be limited due to lack of mobility and the position of the circumvalleys papillae, whose elevation beyond can compromise the blood supply of the flap.

c. Ventral Tongue Flap:

The ventral part of the tongue has two distinct layers: mucous and muscular. Between these layers is the arterial circle formed by the terminal branches of the lingual artery. The position of the lingual artery is near the mucosa of the dorsal and ventral side of the tongue, just at the periphery of the edge of the tongue.

Surgical Technique:

The use of the tongue flap requires:

- A first intervention: Coverage of substance loss
  - 1st time at donor site level: flap removal

The length of the flap has been adjusted sufficiently to cover and fill the oral defect and without exceeding 1 cm of the lingual V to allow rotation, transposition or advancement of the flap. Flap width was dictated by defect width plus 20%, but never exceeded 2/3 of tongue width and thickness exceeded 1cm.

The closure of the donor site was performed with sutures interrupted with Vicryl 4-0 taking care not to close it too tight near the pedicle, thus protecting the vascularity of the flap.

- **2nd Step**: mobilization and migration of the flap

The tongue flap is mobilized according to the topography of the loss of the substance by advancement or by rotation or by turning

- A second intervention: flap withdrawal

Flap withdrawal occurred between two to three weeks under general anesthesia, with nasotracheal intubation performed under nasofibroscopy

CONCLUSION

The tongue flap has proven to be a reliable and easily obtained local flap in oral defects repair surgery. The excellent vascularization and the large amount of tissue that tongue flaps provide have made them particularly suitable for the repair of large fistulas, in palates healed by previous surgery as well as in syndromic hyperplasia and defects of the upper and lower lips, maxillary defects, jugal defects, floor of the mouth and pharynx.

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