World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(CASE REPORT)

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Lip cancer, Estlander Flap: A case report

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World Journal of Advanced Research and Reviews, 2026, 29(01), 225-228

Publication history: Received on 06 October 2025; revised on 25 November 2025; accepted on 28 November 2025

Article DOI: https://doi.org/10.30574/wjarr.2026.29.1.3860

Abstract

The Eslander flap is a flap of the lower lip to the upper lip or vice versa, cut to reconstruct a loss of lateral or juxta-commissural substance measuring between 1/3 and 2/3 of the length of the lip. In our study, we report the case of a 51-year-old patient with a tumor of the upper lip that had been developing for 3 years.

Keywords: Lip cancer; Estlander Flap; Upper lip; Incision; Tumor resection

1. Introduction

The Estlander flap, described by Estlander in 1877, is a heterolabial flap that uses the lower lip to repair the upper lip or vice versa. It is indicated for transfixing loss of tissue in the juxta-commissural lip.

The technique for this flap is similar in part to that of the Abbé flap (it is sometimes called the Abbé-Estlander flap).

The coronary artery of the lip supplies blood to the donor site and must be preserved.

2. Case Presentation

A 51-year-old patient with no known significant medical history presents with a skin and mucosal lesion on the upper lip, with no change in his general condition.

Clinical examination revealed an exophytic tumor with a wart-like appearance measuring approximately 3 cm in length, which had been developing for 3 years. A biopsy was performed, confirming a diagnosis of verrucous carcinoma.

The patient underwent excision of the tumor on the upper lip with 0.5 cm margins and reconstruction of the lost tissue using an Estlander flap on the lower lip, as shown below. The reconstruction flap is triangular in shape and located on the lip opposite the lost tissue, and is the same size as the excision triangle. The lateral edge of the triangle begins at the corner of the mouth.

The medial line is separated from the commissure by a distance that is the same as the base of the excision triangle. It ends 1 to 2 mm before the junction of the red lip and white lip, so as not to risk damaging the coronary pedicle.

After transfixing excision of the lesion, an incision is made along the lines. This full-thickness incision of the lower lip allows a flap of the lower lip to be detached.

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The upper part of the flap is then incised. We begin with a full-thickness incision of the lower lip along the lateral line, from the commissure to the apex of the triangle.

The incision along the medial line is also transfixing and must be performed carefully so as not to damage the coronary pedicle that passes through the thickness of the red lip.

At this point, the flap must be freed from the vestibular attachments in order to achieve sufficient laxity. When the flap is rotated, its only attachment is to the red lip. A 180-degree rotation then allows the loss of substance to be repaired.

The suture is performed in three planes, starting with a commissural stitch. A mucosal plane and a muscular plane are sutured with 3/0 braided thread, followed by a cutaneous plane with 4/0 monofilament. The alignment of the red lip and white lip must be respected.

The postoperative course was favorable, with no signs of pain, necrosis, or infection of the flap.

3. Clinical case: Estlander flap for reconstruction of an upper lip

Figure 1 Outline of the flap and V-shaped excision

Figure 2 V-shaped tumor excision

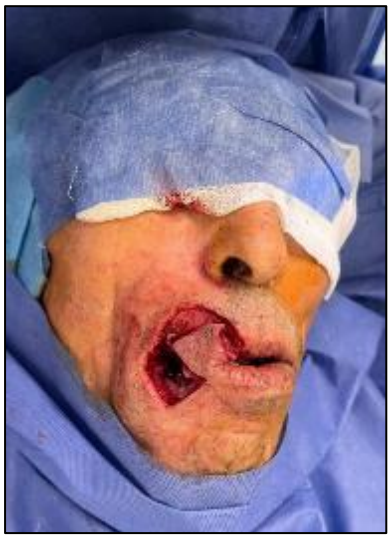

Figure 3 Transposition of the flap

Figure 4 Direct closure of the donor area and fixation

Figure 5 Final appearance

4. Discussion

An Estlander flap is a flap of the lower lip or upper lip, cut to reconstruct a lateral or juxta-commissural cleft lip measuring between 1/3 and 2/3 of the length of the lip. [3]

4.1. Anatomical basis

There are two distinct parts to each lip:

- The white lip: cutaneous, thick, adherent to the underlying muscle bundles. Contains hair follicles, sebaceous glands, and sweat glands.
- The red lip: divided into two parts, namely the moist red lip = internal, mucous, extending from the dental vestibules to the vermilion border; and the "dry" red lip (or vermilion), which is semi-mucous, follows on from the moist lip and extends to the cutaneous-mucosal line. These two parts are separated by the cutaneous-mucosal line. It is thin, harmonious, and gives the lip its aesthetic appearance.

The muscular layer consists of:

- Constrictor muscles = The orbicularis muscle stretches from one corner of the mouth to the other and is arranged concentrically. It comprises an internal (central) bundle along the free edge of the lip and an external (peripheral) bundle
- Dilator muscles: in two layers = Deep: Caninus (raises the wing of the nose), buccinator (inflates the cheeks), quadratus mentis (lowers the lower lip), mentalis

Superficial: zygomaticus minor, zygomaticus major, risorius, triangularis (lowers the corner of the mouth), platysma.

All of these muscles converge at a point located at the commissure : The modiolus. The lips are supplied with blood by the superior and inferior coronary branches that originate from the facial artery. They run deep to the orbicularis muscle and project approximately 7 to 8 mm from the free edge of the lip at the mucoperior labial junction.

4.2. Surgical technique

Preoperative drawing: Outline of the triangular flap of the upper lip with a lower base and upper [1] apex. The apex of the triangle can be raised laterally and nasally if necessary. The base of this triangle is limited by the white lip-red lip border. The width of the flap is equal to half that of the PDS.

Installation: of the entire face, prior packing.

4.3. Procedure

- Transfixing excision with a cold blade of the lower lip lesion in a W shape according to the excision margins specific to the tumor. [2]
- Incision according to the pre-established outline of the lip triangle
- Dissection with scissors, passing under the orbicularis muscle
- Lifting of the upper lip flap, which is rotated 180° on its pedicle and fits into the external or internal breach of the W
- Fixation and closure in three planes: first the mucosa with Vicryl, then the muscle, and finally the skin with skin sutures
- Direct closure of the donor site

5. Conclusion

The Estlander flap is a heterolabial reconstruction flap used for juxta-commissural tissue loss. It is based on the coronary artery and can be refined in a second stage.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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[2] Estlander JA. Method of autoplasty of the cheek or a lip using a flap taken from the other lip. Rev Mens Med Chir 1877;1:

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