
| RESEARCH ARTICLE

The « Cascade Flap » of Emmet: Case Report

Nasr Mounia

Plastic and reconstructive surgery specialist, regional hospital center Moulay Ali Cherif, Errachidia

Corresponding Author: Nasr Mounia, **E-mail:** Docteurnasr.m@gmail.com

| ABSTRACT

The nose is a central organ of the face. There is many technics to reconstruct a loss of substance about the tip of the nose, from local to regional flap, to remote one. This case is about an old patient who benefited from tumor excision of a nodular basal cell carcinoma in the tip of the nose. The "cascade flap" of Emmet is a very good technic to rebuild a loss of substance that affects the tip of the nose up to 30mm of diameter. The surgical technic is simple and reproducible. And the scars are well camouflaged.

| KEYWORDS

Cascade flap; Emmet.

| ARTICLE INFORMATION

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1. Introduction

Nose reconstruction is a very broad chapter that covers countless situations and very varied repair techniques depending on: the etiology, whether tumoral, traumatic, malformative; the terrain, from child to old person, from man to woman; the topography, from the upper part of the nasal bridge to the tip; the extent and depth of the lesion, from localized superficial substance loss to subtotal, total or extended mutilation. As a central organ of the face, the nose has a symbolic value and its absence not only causes aesthetic disorder and an imbalance of facial harmony, but also affects self-representation. A selection of techniques emerges depending on the topography of the loss of substance, its superficial or transfixing character. The "cascade flap" of Emmet combines two flaps: one nasal for the loss of substance, the other glabellar to fill the donor area of the previous one (Fig 1). It manages to cover an area of 25 to 30 mm in diameter, and to reach the upper part of the columella.

2. Case report:

This is a 71-year-old patient with a history of medically treated hypertension who had presented with nodular basal cell carcinoma of the nasal tip for several years. Surgical excision was performed with 8mm peripheral margins, preserving the deep cartilage. The diameter of the defect was estimated at 27mm in the long axis, slightly lateralized to the left relative to the axis of the nasal tip.

After the results of the pathological examination demonstrated that the tumor margins were healthy, the patient was scheduled for reconstruction of the nasal tip defect.

Emmet's cascade flap was chosen to cover this defect, as it is located at the tip of the nose, measures 27 mm in diameter, and preserves the deep cartilage.

3. Result:

This technique combines two flaps, one nasal and one glabellar, with opposing pedicles (Fig 1a). After designing the two flaps and extending the rounded defect in a "V" to the right, they are lifted under the muscular plane. Then, after a wide undermining facilitated by a preliminary infiltration of 1/500 adrenaline serum, the nasal tip defect is closed with the first flap, and the second with the adjacent flap (Fig 2-3).

The postoperative bandage is applied daily, with saline or antiseptic cleansing, followed by fucidic acid ointment, and then covered with a sterile compress and adhesive tape. The stitches are removed 10 to 15 days postoperatively.

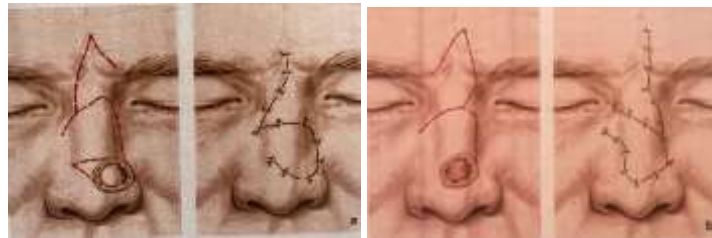


Fig 1: "cascade flap" of Emmet

- a. The pedicles of the flaps are opposed for the loss of substance of the tip of the nose
- b. The pedicles of the flaps are on the same side for a loss of substance of the upper part of the tip



Fig 2: Drawing of the Emmet's cascade flap with opposing pedicles



Fig 3: Placement of the two flaps and coverage of the loss of substance and the donor area

4. Discussion :

The forehead has been a great reserve of tissue for repair of nasal defects. Forehead flaps have been used to close larger nasal defects either as a one or two stage procedure with great variety in the flaps to be used [1, 2].

Marchac [3, 4] modified the Rieger flap, narrowing the pedicle around the inner canthal vessels, utilizing the V-Y principle in the upper flap while rotating the lower flap more around the axis of the inner canthus. With the cascade flap we have separated off the upper glabellar flap, enabling the lower nasal flap to transpose down more readily. The glabellar flap then moves down using a V-Y slide or a transposition to the upper nasal bridge.

This is at the cost of an additional oblique scar but of good quality across the middle part of the nasal bridge. When the loss of substance is high on the nose, the pedicles of the two flaps are one above the other, on the same side. When the loss of substance is very low, the pedicles of the two flaps are opposite and we then have a real lengthening effect, the lower nasal flap due to a counter incision below the internal canthus can descend lower than the Rieger or Marcgac flap. The glabellar flap is traced on demand when the lower flap is positioned [5].

5. Conclusion :

Repair of the lower nose following trauma or tumour excision will have varying requirements depending on defect shape, size and depth, skin type, age and patient preference. The "cascade flap" of Emmet allows for the repair of rather large tip defects where other local flaps are limited by the size of the defect.

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