

Fig. 7.1 The Charles Nelaton procedure (1881) for reconstructing the columella [1]

A nasolabial flap is pulled through an incision in the alar groove into a nostril. The flap is folded on itself to form a new columella. A second-stage procedure is required to divide the bridging part of the flap and return it to the cheek.

An alternative method is to detach the alar base, transfer the flap to the nasal septum and reconstruct the columella. [1]

Interpolated flaps are flaps consisting of skin and subcutaneous tissue moved in an arc about a pivot point into a nearby but not immediately adjacent defect. The pedicle of the flap, containing its blood supply, must pass over or under the intervening tissue to reach the recipient site.

For a one-stage procedure, the pedicle can be de-epithelialised or converted to a purely subcutaneous pedicle. This passes to the recipient site through a tunnel created beneath a bridge of skin. Not infrequently the pedicle passes over the intervening skin bridge, and a second-stage procedure is required 2–3 weeks later to set in the flap and return the remaining pedicle to the donor site.

An island flap is one where there are no skin elements in the pedicle.

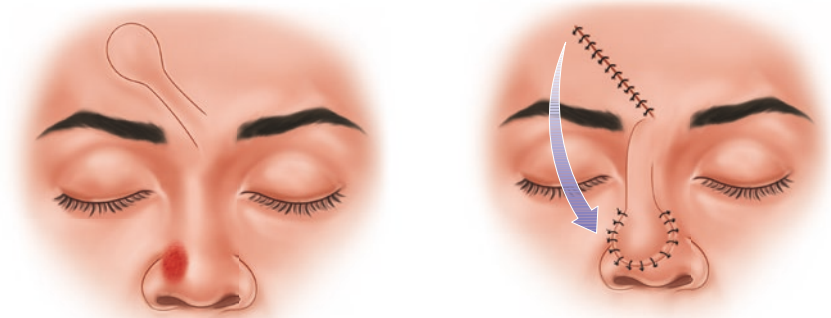


Fig. 7.2 A forehead interpolation flap to repair a nasal defect

Paramedian Forehead Flap

Classification: Interpolated flap/two stages/flaps that move about a pivot point.

Clinical case scenario: A large infiltrating nodulocystic basal cell carcinoma on the dorsum and left sidewall of the nose.



Fig. 7.3 An infiltrating nodulocystic BCC on the dorsum and sidewall of the nose in a 59-year-old man (a), excised and repaired with a paramedian forehead interpolated flap (b). The pedicle (c) was divided at a second-stage procedure (d)

Note

In this situation the flap has passed over the intervening bridge of skin from flap donor to recipient site. This necessitated a second-stage operation 2 weeks later to divide the pedicle when the flap in its recipient bed had obtained a sufficient blood supply to survive on its own.

Interpolated Flap with Buried Pedicle

Clinical case scenario: A poorly differentiated squamous cell carcinoma on dorsum of nose.



Fig. 7.4 A poorly differentiated SCC on the dorsum of nose in a 59-year-old man (a), was excised and repaired with a one-stage paramedian forehead flap (b, c), with a buried pedicle (d). Result 2 years after surgery and post-operative adjuvant radiotherapy (e, f)

Surgical method: The poorly differentiated squamous cell carcinoma on the dorsum and sidewall of the nose was widely excised. A paramedian forehead flap was planned and elevated, and the pedicle portion of the flap was de-epithelialised. The flap was then brought down through a glabellar tunnel to its recipient site on the nose. The patient underwent post-operative adjuvant radiotherapy.

Note

In this case the pedicle of the flap was de-epithelialised and brought to the recipient site through a subcutaneous tunnel. This procedure retained the subdermal vascular

plexus to maintain the blood supply to the flap. Care must be taken in creating this tunnel to avoid having it too tight and constricting the pedicle. The glabellar area is a good place for such a tunnel especially in older people with lax skin in this area.

The buried pedicle initially causes a prominence which will subside but will not completely disappear with time. Forehead skin for reconstructing the nose is a good choice as it provides an excellent colour match and a certain amount of rigidity if nasal cartilage has been removed in the excision.

Island flaps can be developed on a purely subcutaneous pedicle. No skin elements are retained in the pedicle, and there is no subdermal vascular plexus. The skin bridge between flap donor site and recipient site can be divided to eliminate constriction of the pedicle.

Subcutaneous Pedicle Flaps on Other Parts of the Face [3]

The skin colour and texture between flap donor and recipient sites are closer in composition than a skin graft. The initial bulkiness of the subcutaneous pedicle subsides with the passage of time.

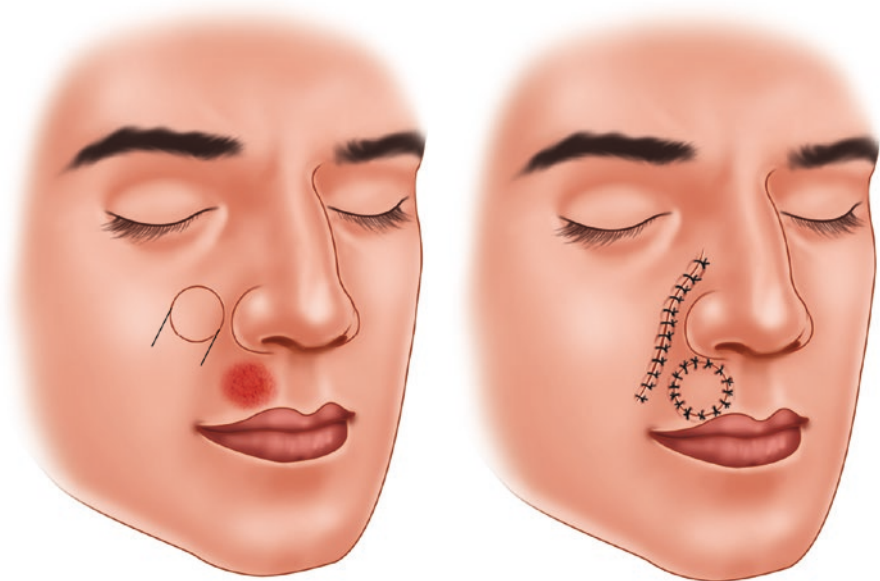


Fig. 7.5 Subcutaneous pedicle flap from nasolabial fold to upper lip

Vascular Island Flaps [2]

In known vascular territories, the specific artery and veins to the area can be skeletonised to provide the flap pedicle. Examples include a neurovascular island flap to innervate a fingertip or a scalp vascular flap to transfer an island of hair-bearing skin to reconstruct an eyebrow.

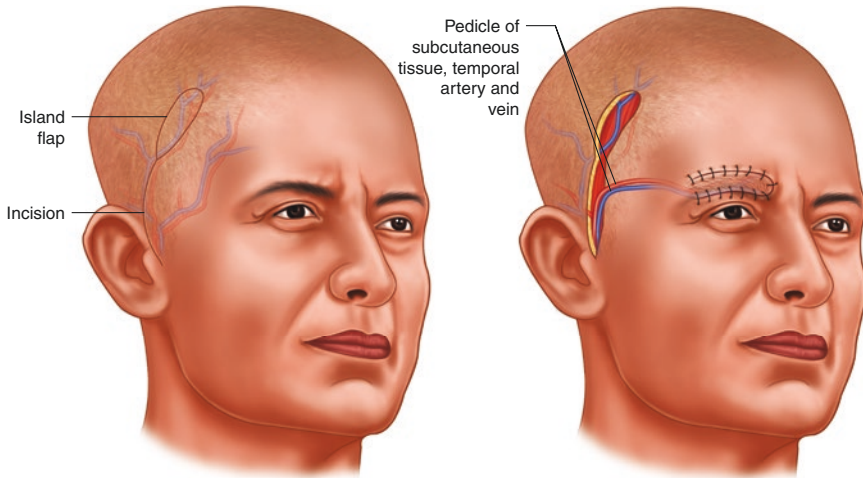


Fig. 7.6 Vascular flap based on temporal artery and vein to transfer a hair-bearing scalp flap to reconstruct the right eyebrow

Serendipity Flap

Occasionally a flap will appear from an unrelated situation.

Clinical case scenario: A 57-year-old woman, with an ulcerated basal cell carcinoma infiltrating her right concha. She was also self-conscious about her facial ageing changes.

Surgical method: At surgery to widely excise the basal cell carcinoma, the preauricular skin normally discarded in a mini congruent facelift was used as an interpolated flap with a de-epithelialised pedicle, tunnelled to resurface the excisional conchal defect. A mini-facelift was completed bilaterally.



Fig. 7.7 A BCC in the right conchal fossa of a 57-year-old woman (a), excised and repaired with a preauricular flap raised during a mini-facelift procedure (b, c). The pedicle of the flap was de-epithelialised and tunneled through to the conchal defect (d). Photograph before (e) and 2 weeks post-operatively (f)

The Bipedicle Upper Eyelid Flap

This flap, initially attributed to Tripier, was popularised by Manchester [4] for skin and muscle replacement in lower eyelid repairs. As it is transferred over the globe of the eye from upper eyelid to lower eyelid, it has been included in this chapter on interpolated flaps in addition to the chapter on advancement flaps.

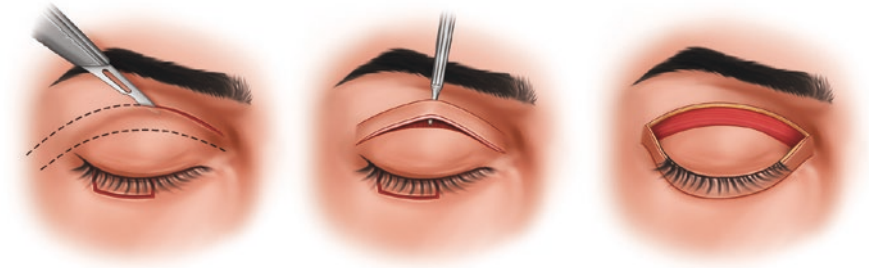


Fig. 7.8 Bipedicle upper eyelid flap planned, raised and transferred to lower eyelid

References

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