Maastricht University Leading in Learning!

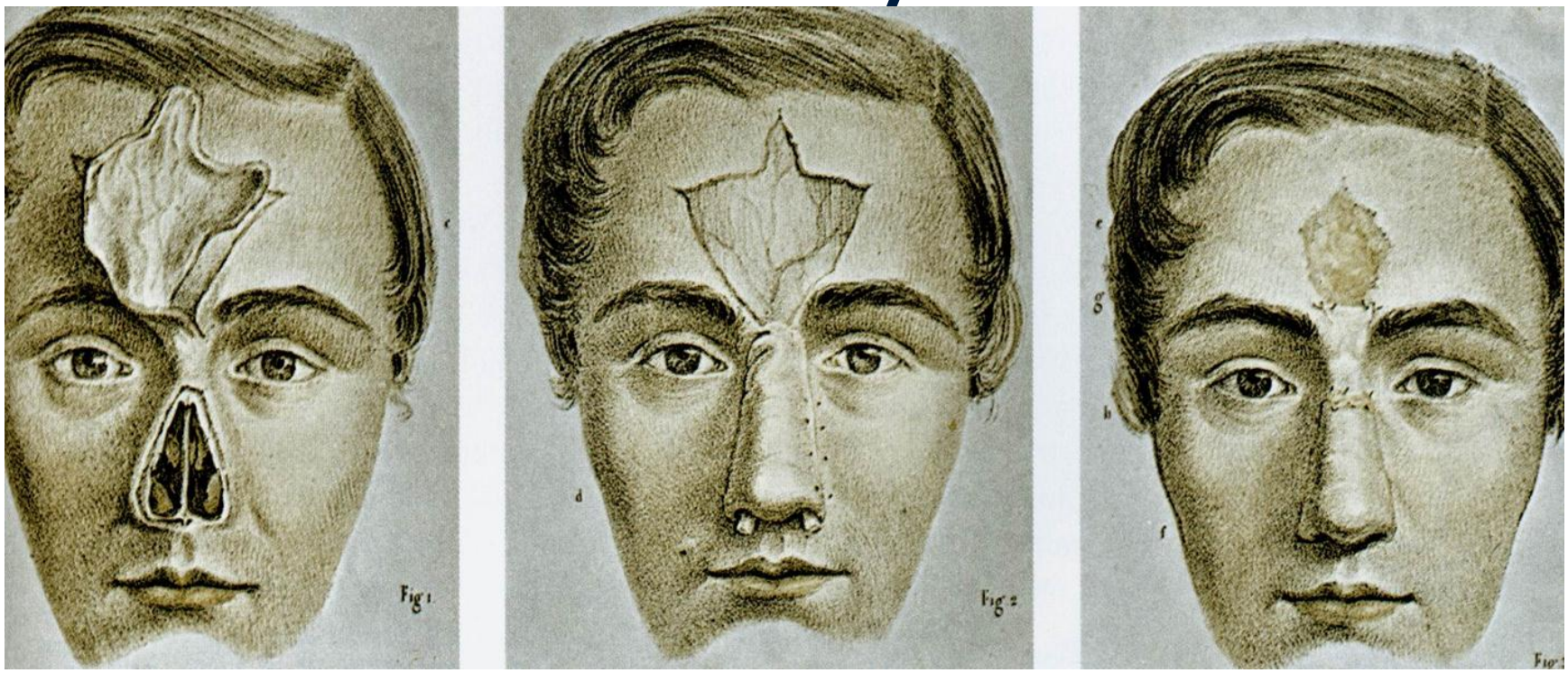
Reconstructive plastic surgery in head and neck oncology

S. Tuinder

Plastic Surgery unit MUMC+ Maastricht

Maastricht, 21-5-15

History



from: J. M. Bourgery u. Claude Bernard „Traité complet de l`anatomie de l`homme", Paris 1866

History

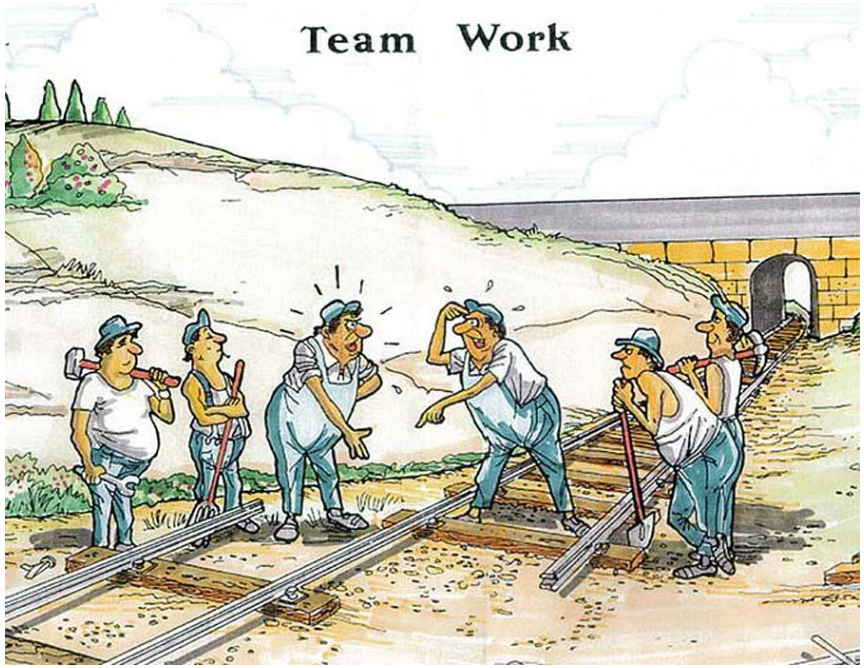
from: Gaspare Tagliacozzi „De curtorum chirurgia per insitionem“, Venedig 1597

History

Principles of plastic surgery

- Team
- Skin lines
- Aesthetic units
- Reconstructive ladder
- Contour and function


Together
Everyone
Achieves
More


Team Work

Tension area

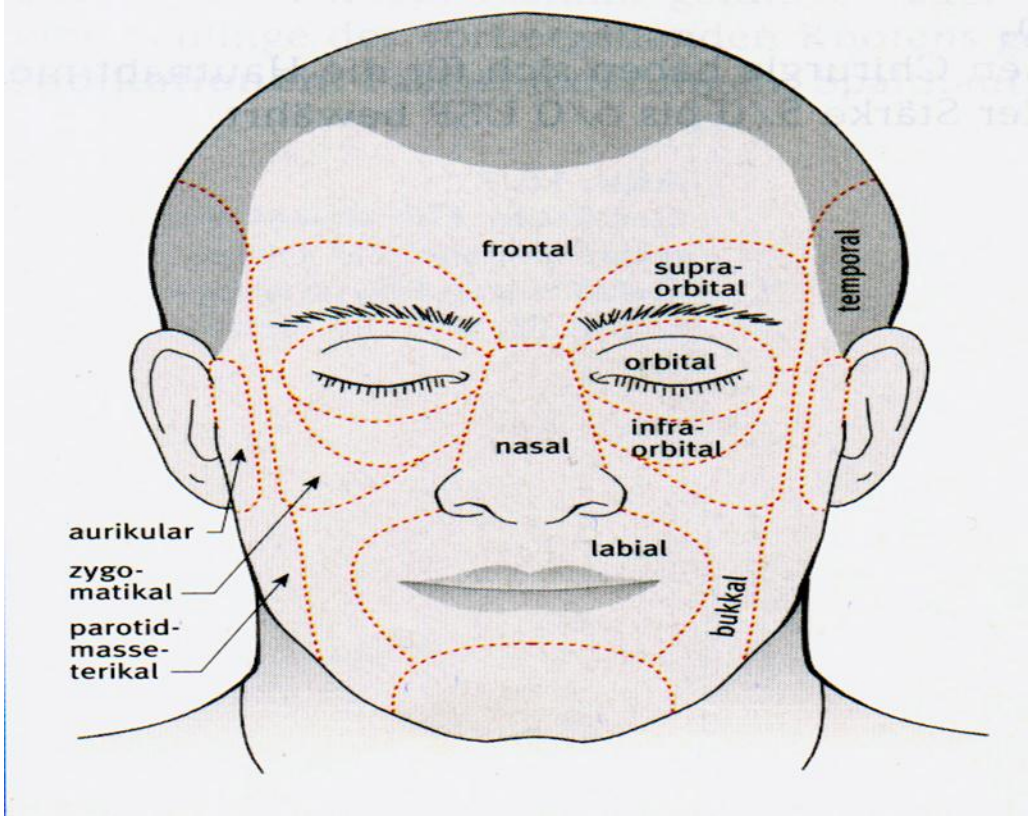
to be radical

Aesthetic

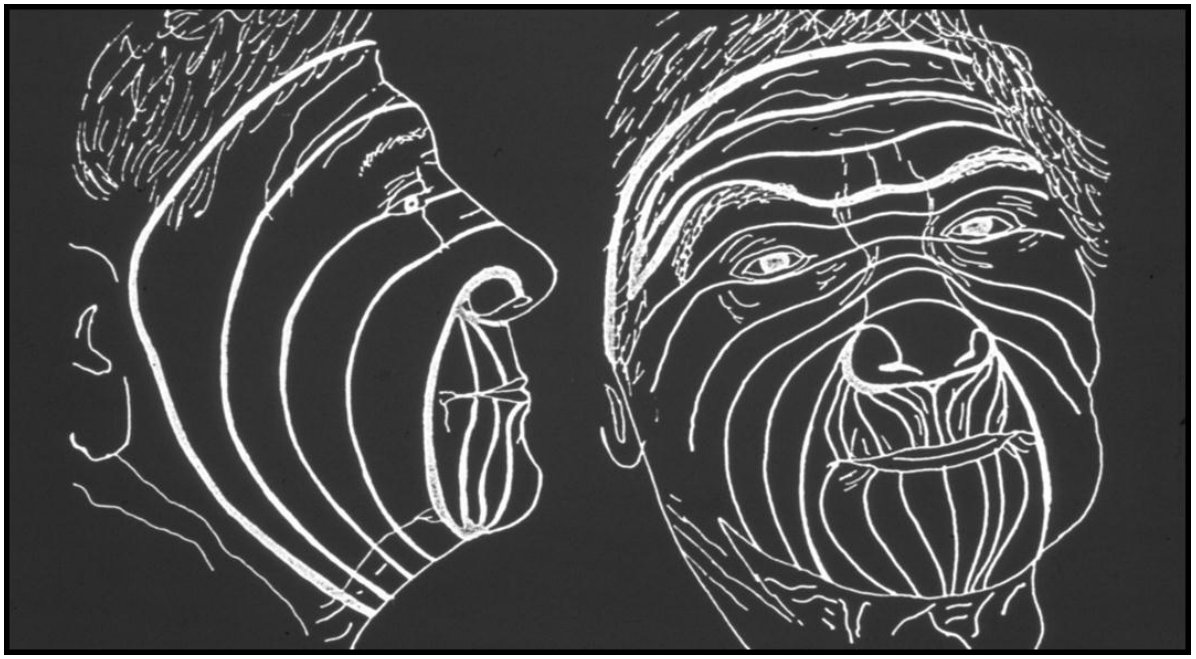
RT

function

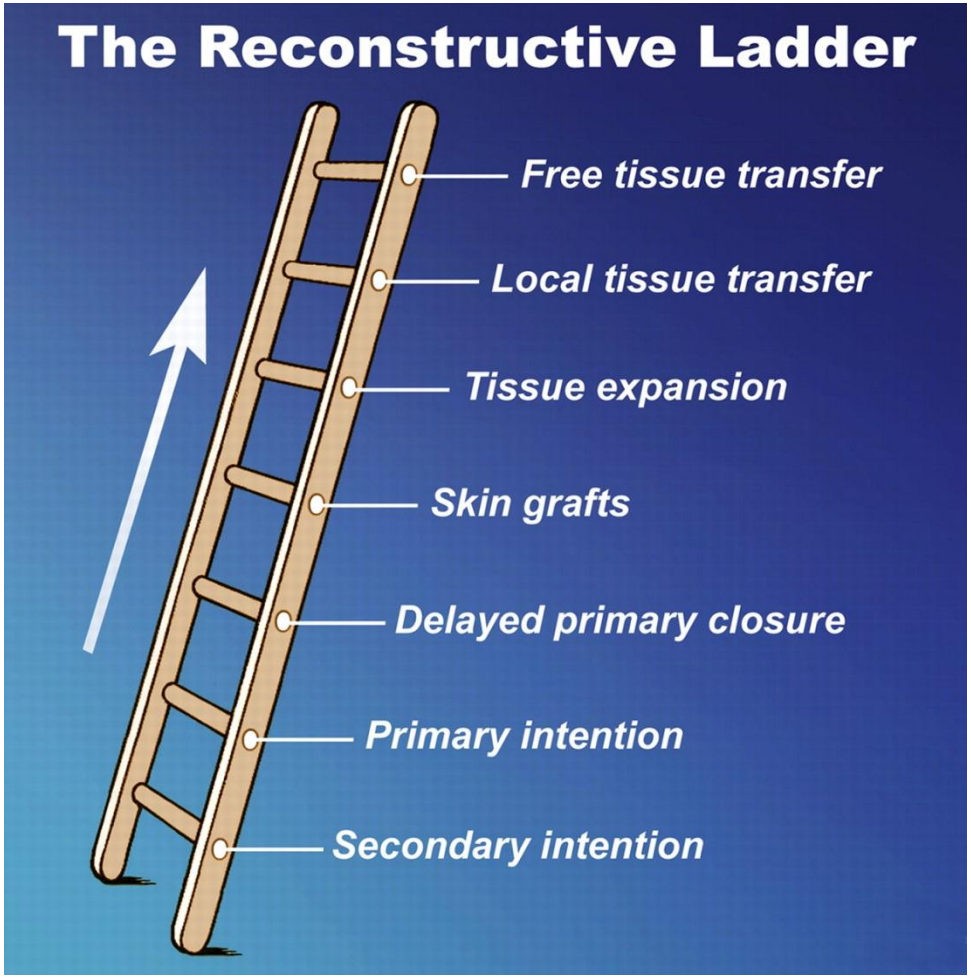
Aesthetic units



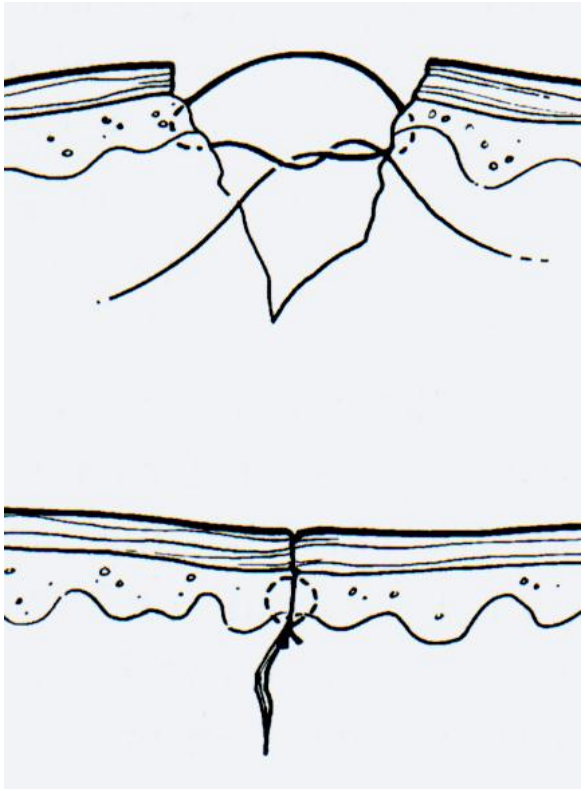
Skin lines

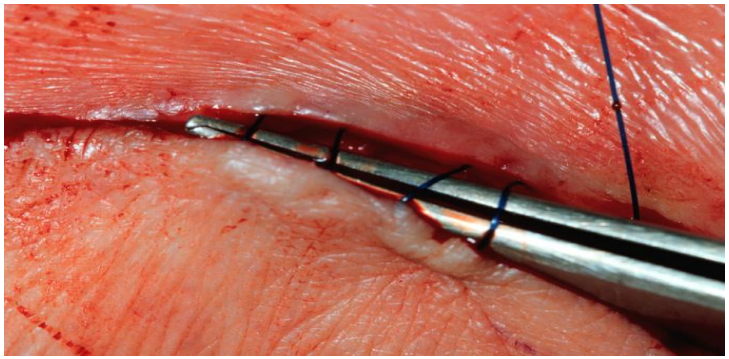


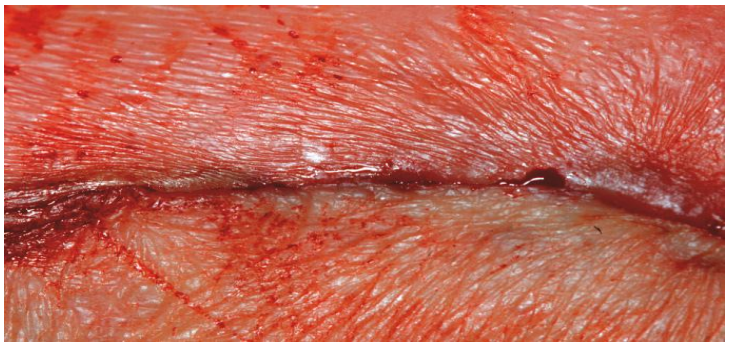
Reconstructive ladder



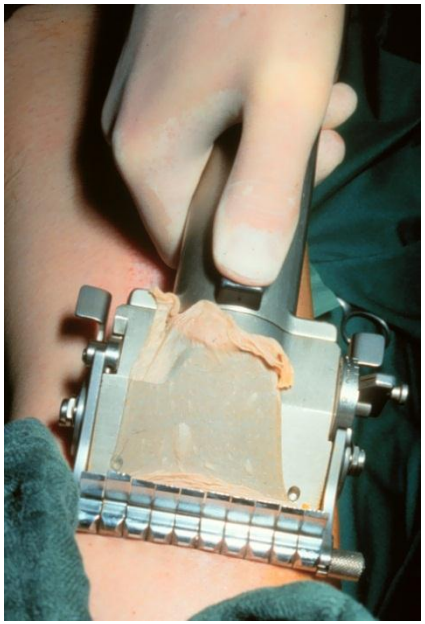
Primary intention

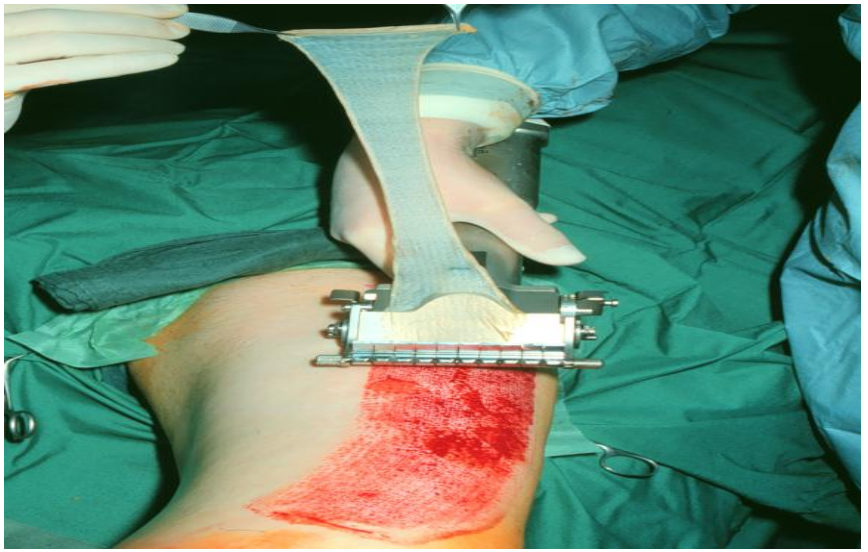






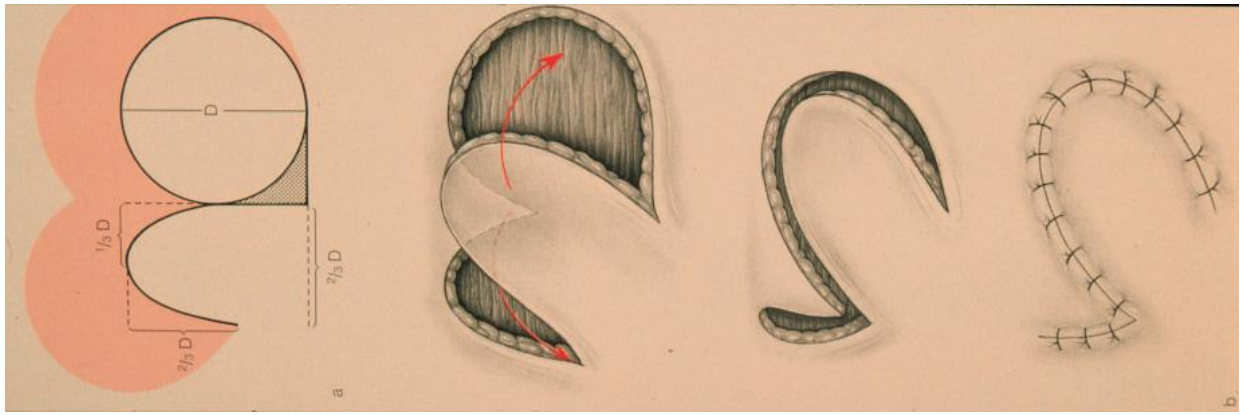
Skin graft



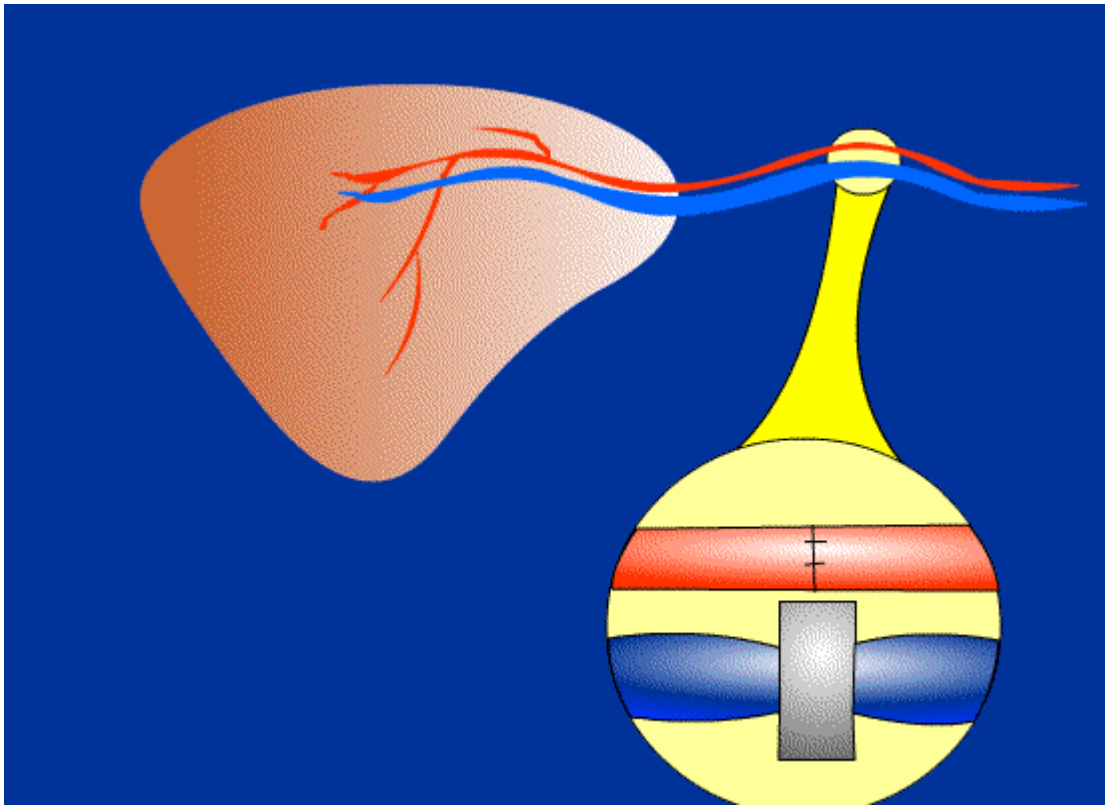


Tissue expansion

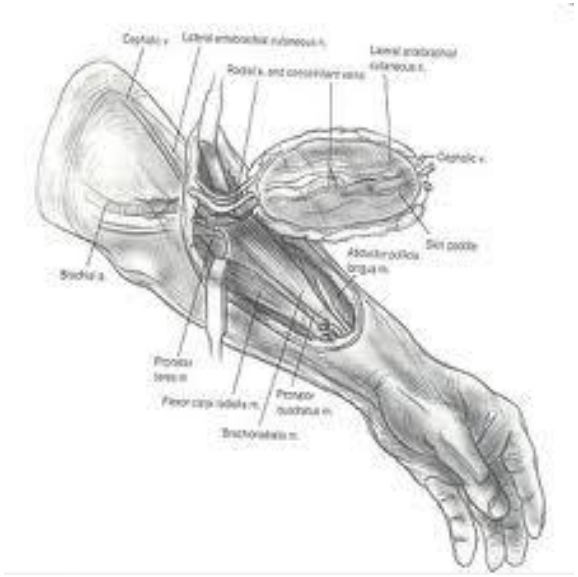
Local tissue transfer



Free flap



Free flap

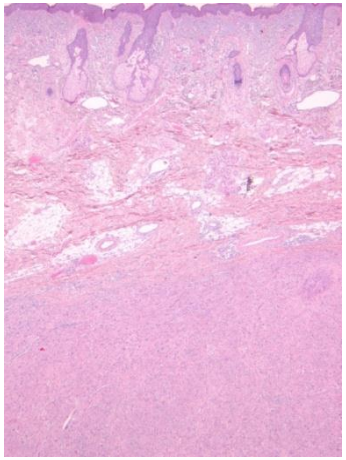


Contour and function

- Example: face and facial palsy surgery….

Case: man H., 12-6-66

Fast growing, not painful nodus cheek → Mei 2011 excision By dermatologist



PEComa: Malignant perivascular epithelioid cell tumor

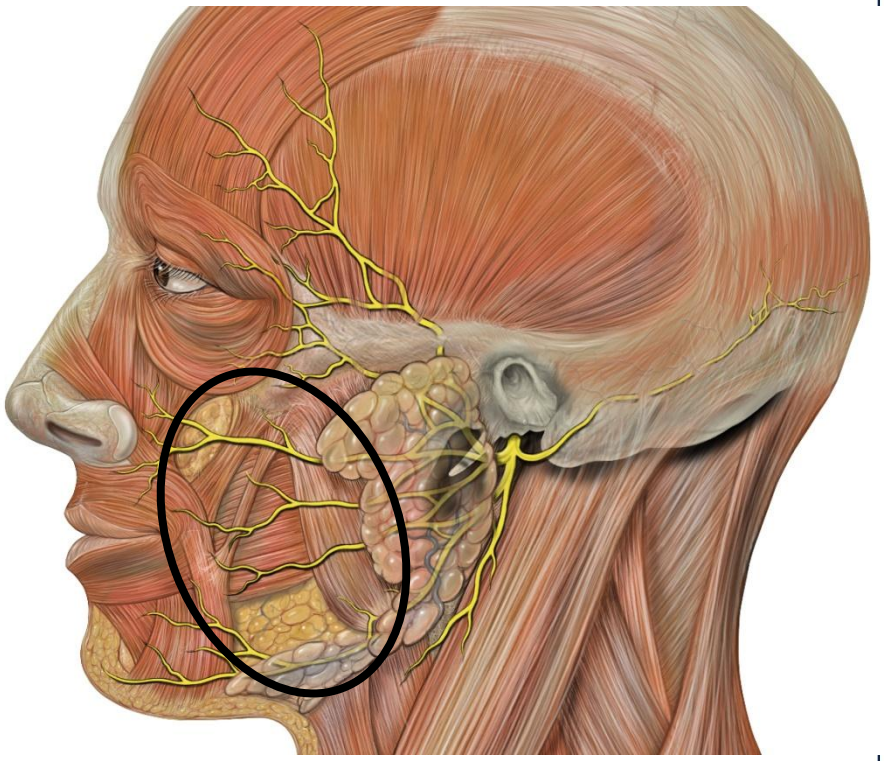
PA: tumor localized in the diep dermis en subcutis. Irregular nests and fascicles were formed, which consisted of a mix of epithelioid and spindled cells. Between the tumor cells multiple delicately branching capillaries are present. The tumor cells had abundant eosinophilic cytoplasm, containing enlarged polymorphic and vesicular nuclei with prominent nucleoli. Mitoses were seen at a rate of 5 mitoses per 10 high power fields. There was no necrosis.
Immunohistochemically, the tumor cells expressed several melanocytic markers, with exception of S100. There was a strong immunoreactivity for CD68, CD10 and vimentin and weak, but focal expression of alpha smooth muscle actin. Other muscle markers were negative. The tumor was negative for epithelial markers and neuro-endocrine markers.
Based on this histological and immunohistochemical profile, a perivascular epithelioid cell tumor (PEComa) was diagnosed. Because of the mitotic rate of 5 mitosis per high power field and the nuclear atypia, this tumor was considered a malignant PEComa.

Head-neck team decision:
excision with 2 cm marge followed by RT

Ultrasound neck,PET-CT en CT thorax (neg.)

Head-neck team decision: excision with 2 cm marge followed by RT

- **What does it mean?**
- Defect through and trough of the cheek ,6 by 5 cm, with sacrifice of the buccal en marginali branch of the facial nerve, zigomatici muscles, part of the levator alequae nasi en labii superior, part of the orbicularis oris, masseter, parotis gland, mucosa.



Reconstruction: 2 weeks after

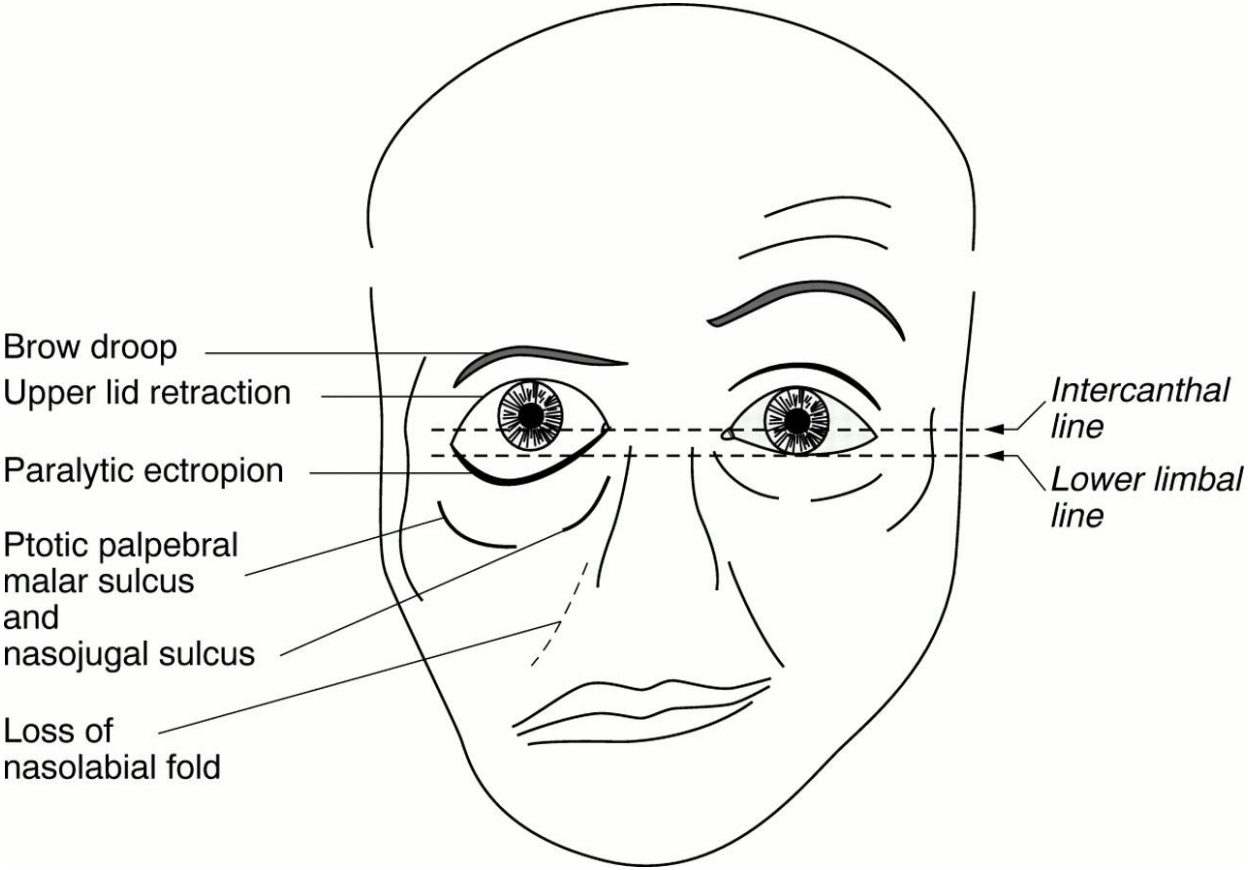
- Functional gracilis flap, een split skin graft for the mucosa. Mustarde' flap for the skin defect.

- Re-or because of problems with the SSG because of saliva lekkage.

Radiotherapy

- He received a total dosis of 51 Gy in 30 fractions in the reconstructed area and 60 Gy in 30 fractions around.

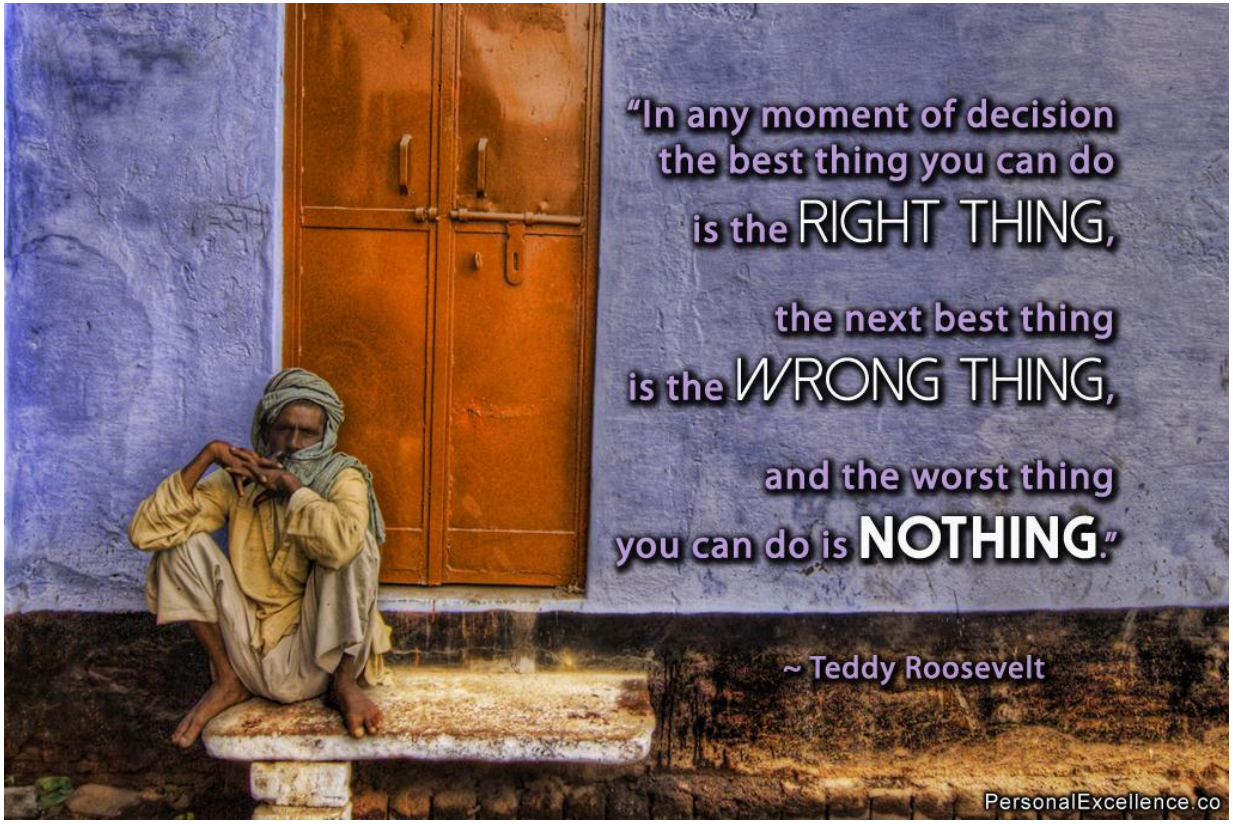
Facial palsy



CAUSES

- Intracranial region: trauma, infection, congenital problems (moebius syndrome), tumors…
- Temporal bone: infections, trauma, tumors….
- Parotid region: tumor, trauma….
- Bells palsy (25:100,000 p.a.• Spontaneous onset• 85% good resolution within 2 months• Aetiology viral vs inflammatory• Steroids +/- NSAIDs• DIAGNOSIS OF EXCLUSION)

TIMING AND MODALITY



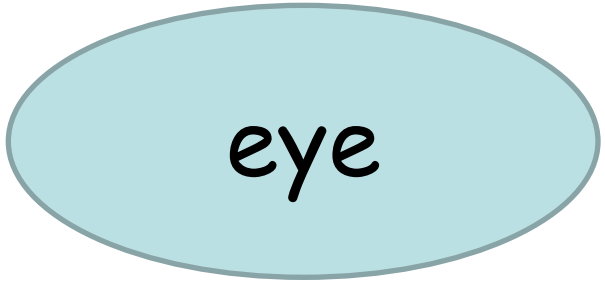
Possibilities…

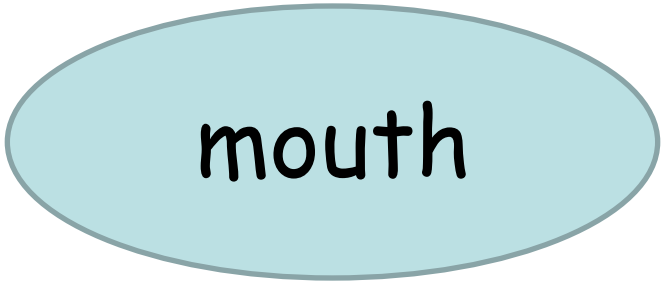
new

Old (more than 2 years)

Congenital (complete or partial)

2 problems





eye

Fig 2. (A) Frontispiece from the 1593 Roman edition of the Avicenna Canon. Avicenna (Abu-Ali-Al Husayn ibn Abdalla ibn Sina, 979-1037 A.D.) studied the etiology, treatment and prognosis of peripheral facial paralysis, which he distinguished from central facial paralysis[4]. (B) Written in Arabic, differential diagnosis between central and peripheral facial paralysis. (C) Grimaces from Ancient Switzerland with facial paralysis[3].

eye new (1 to 2 years)

- GRAFT (n. suralis, great auricular nerve, nervus safenus)

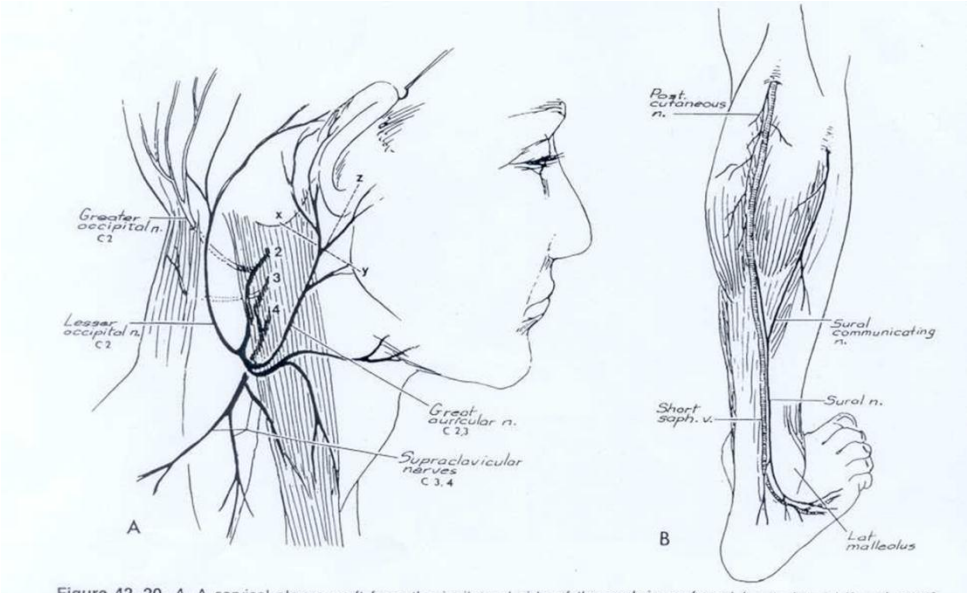


Figure 42–20. *A*, A cervical plexus graft from the ipsilateral side of the neck is preferred (contralateral if nodes are involved). Usually a 9 to 12 cm graft can be obtained with a main trunk and four or five branches of satisfactory physical match. *B*, For crossface nerve grafting, a sural nerve graft 30 to 40 cm in length is obtained. (From Baker, D. C., and Conley, J.: Facial nerve grafting: a thirty year retrospective review. Clin. Plast. Surg., 6:345, 1979.)

eye new (1 to 2 years)

- BABYSITTER PROCEDURE, jump anastomosis: hypoglossus f-facials anastomosis and masseteric-facialis anastomosis

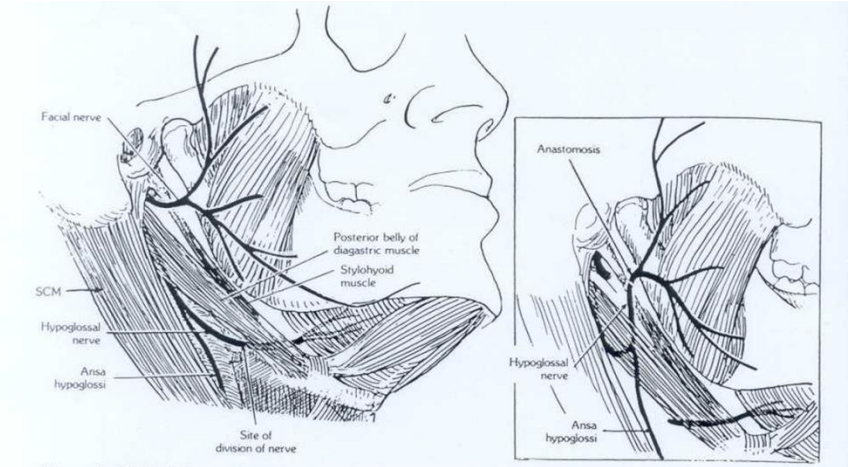
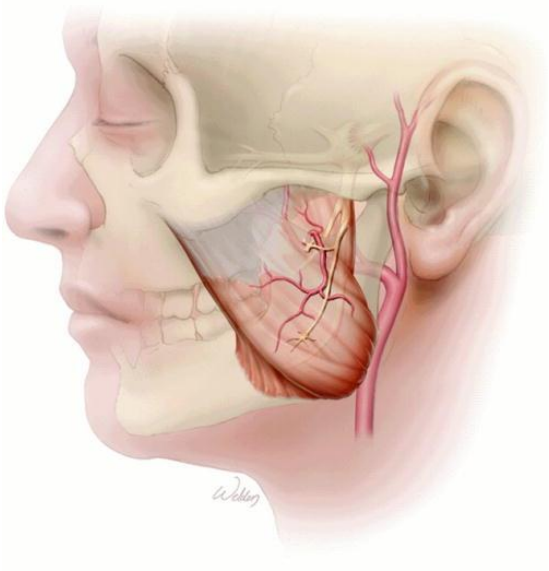
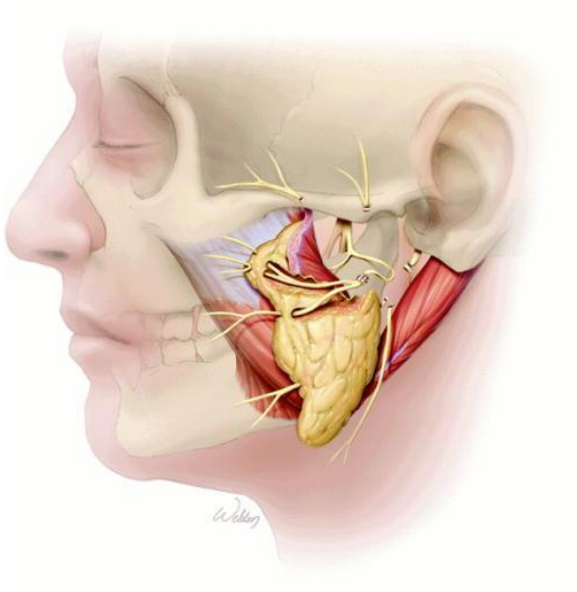


Figure 42–31. Technique of hypoglossal-facial nerve anastomosis. The main facial nerve trunk is divided near the stylomastoid foramen. The hypoglossal nerve is divided just before it dives deep to the mylohyoid muscle. *Inset,* The hypoglossal nerve is passed beneath the posterior belly of the digastric muscle and anastomosed to the main trunk of the facial nerve. Usually the ansa can be maintained intact. The anastomosis must be accomplished without tension. (From Baker, D. C.: Facial reanimation by hypoglossal-facial nerve anastomosis. *In* Brent, B. (Ed.): The Artistry of Reconstructive Surgery. St. Louis, MO, C. V. Mosby Company, 1987, p. 299.)

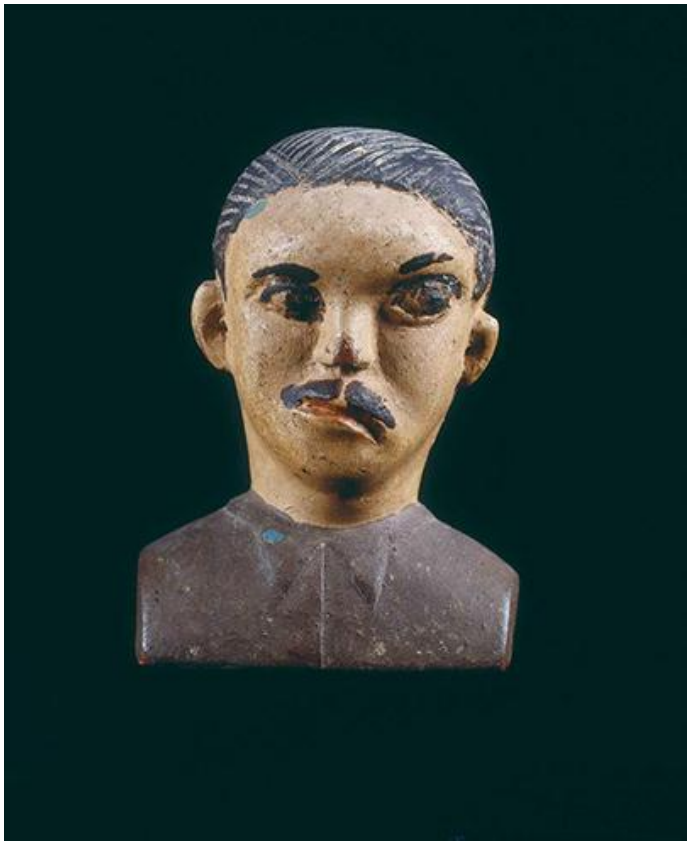
eye new (1 to 2 years)

- BABYSITTER PROCEDURE, jump anastomosis: hypoglossus f-facials anastomosis and masseteric-facialis anastomosis





mouth



Mouth: new

- Graft facial-facial
- Graft facial-masseter
- Graft facial-hypoglossus
- Combinations

Mouth: old en new
Labbè procedure

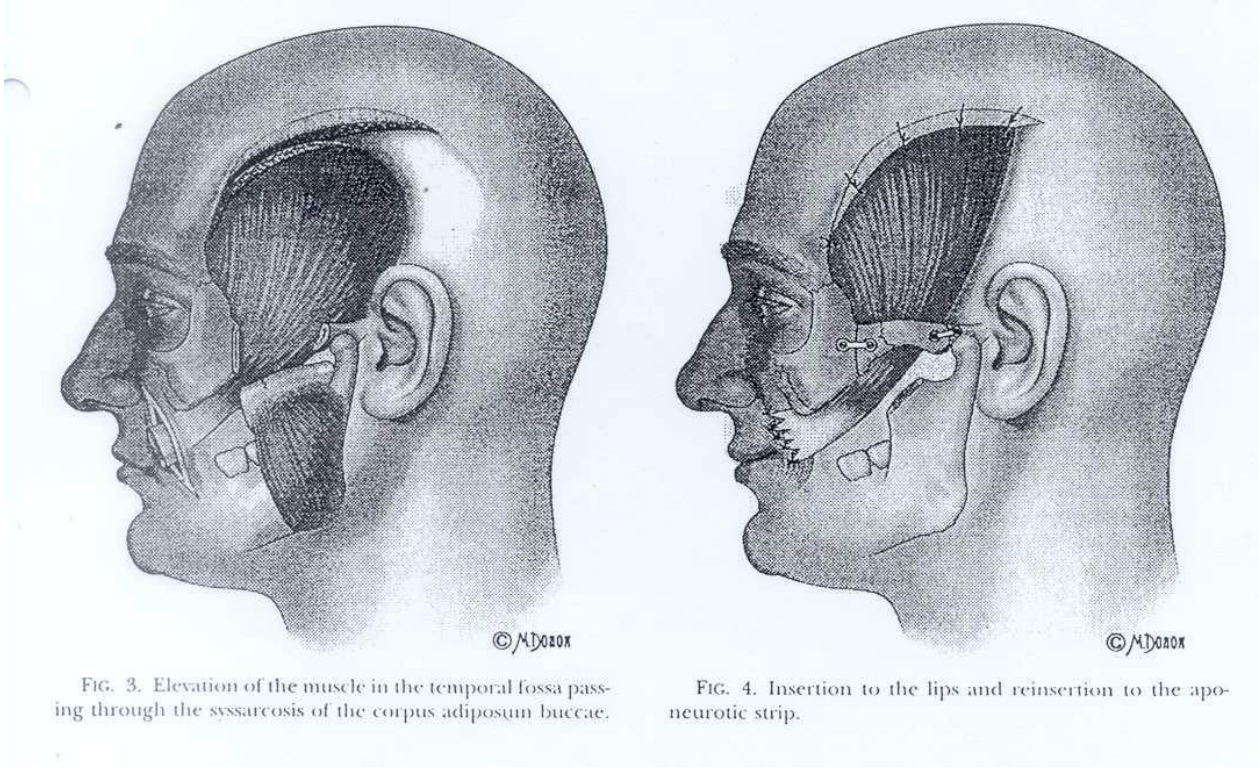


FIG. 3. Elevation of the muscle in the temporal fossa passing through the syssarcosis of the corpus adiposum buccae.

FIG. 4. Insertion to the lips and reinsertion to the aponeurotic strip.

Free muscle transfer (old or congenital)

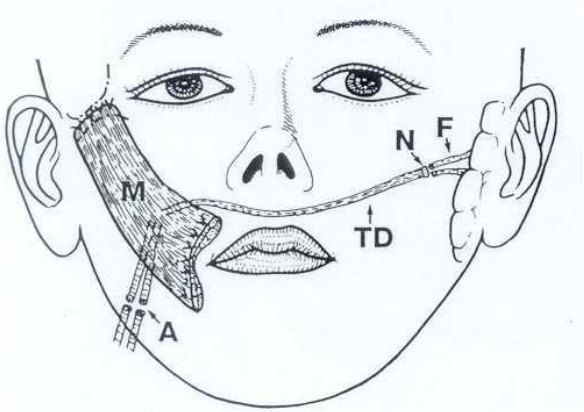


FIG. 1. Schema of the one-stage latissimus dorsi muscle transfer for a paralyzed face. M, latissimus dorsi muscle; A, site of vascular anastomosis; N, site of nerve suture; TD, thoracodorsal nerve; F, intact facial nerve.

Thank you!