

Reanimation of the paralysed
face-
an overview of surgical
methods

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Reanimation of the Paralyzed Face

- Functional deficits
 - Lagophthalmos and ectropion
 - Oral incompetence
 - Nasal obstruction
 - Mastication difficulties
 - Articulation difficulties
- Cosmetic deformity
 - Psychological distress

Reanimation of the Paralyzed Face

- Goals
 - Functional
 - Corneal protection
 - Oral competence
 - Cosmetic
 - Symmetry at rest and in movement
 - Facial expressions

Surgical procedures

Bewildering array of procedures

Can be grouped

Reanimation of the Paralyzed Face

- Static

- Slings
- Gold weight
- Tarsorrhaphy
- Lower lid shortening
- Brow lift
- Face lift

- Dynamic

- Nerve grafting
 - Direct
 - Interposition
 - Crossover
- Muscle transfer
 - Regional
 - Free flap

Reanimation of the Paralyzed Face

- Restore neural input
- Replace nonfunctional facial neuromuscular units
- Statically suspend facial tissues
and

Adjunctive procedures for specific defects

Reanimation of the Paralyzed Face

- Restore neural input
 - Procedure of Choice
 - Distal facial nerve available
 - Within 3 years of injury
 - Best outcome
- Options
 - End-to-end anastomosis
 - Interposition graft
 - crossover

Reanimation of the Paralyzed Face

- Replace nonfunctional facial neuromuscular units

2nd choice

- Long standing paralysis
- Lack of normal neuromuscular units

Dynamic function

- Options

Regional muscle transfer

Free muscle transfer

Reanimation of the Paralyzed Face

- Statically resuspend facial tissues

3rd choice

- Patient factors
- Temporizing measure

Symmetry at rest

- Options

Fascia or synthetic slings

Reanimation of the Paralyzed Face

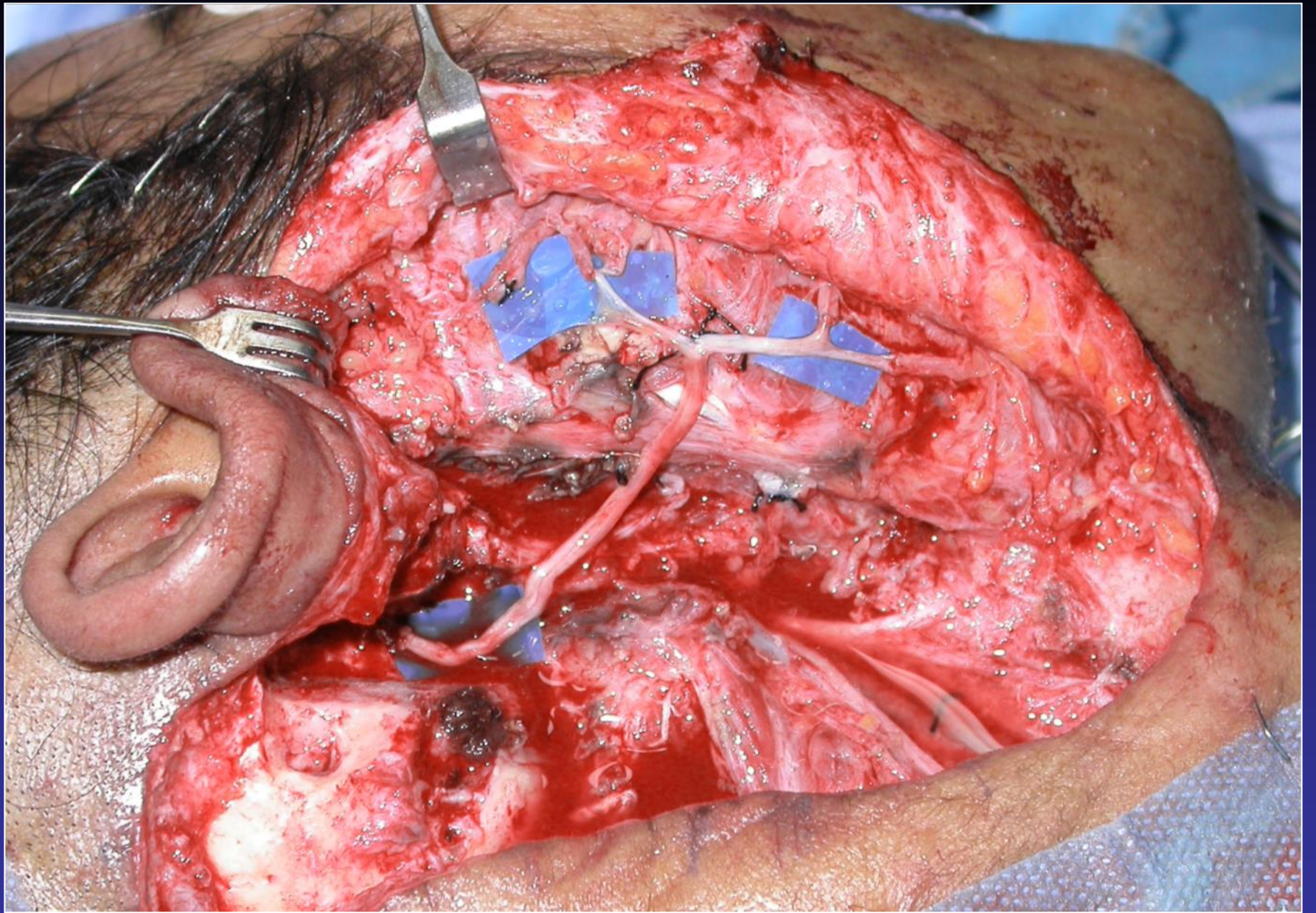
- Adjunctive procedures to address specific defects

Options

- Gold weight implants/lid springs
- Lid shortening procedures
- Lower lip wedge resection
- Brow/face lift
- Botox

Reanimation of the Paralyzed Face

- Primary anastomosis
- Interposition graft
- Crossover graft
- Cross-facial graft



Restoration of Neural Input

- Crossover graft
 - Proximal facial nerve disrupted
 - Donor motor nerve
 - Hypoglossal
 - Accessory
 - Ansa hypoglossus
 - Trigeminal
 - phrenic



Replacement of Nonfunctional Facial Muscles

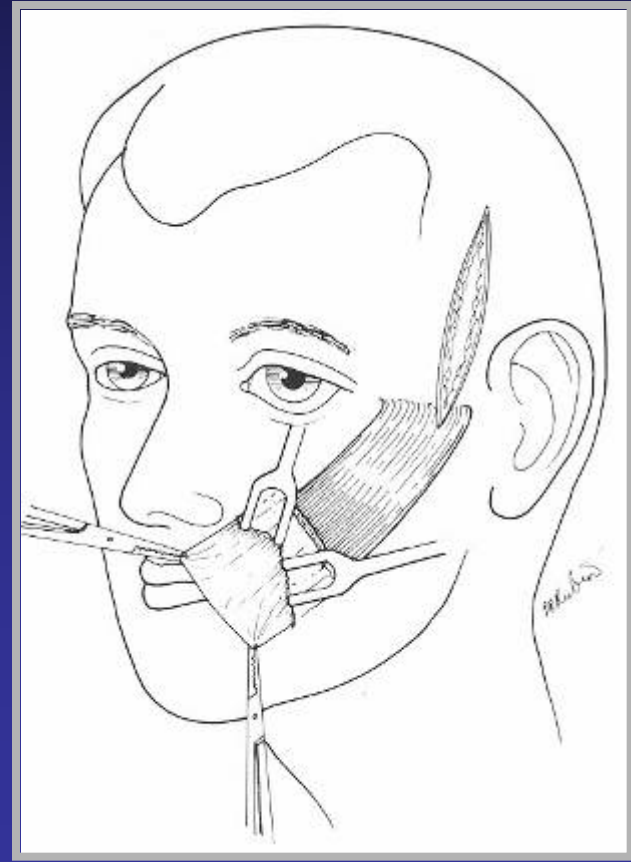
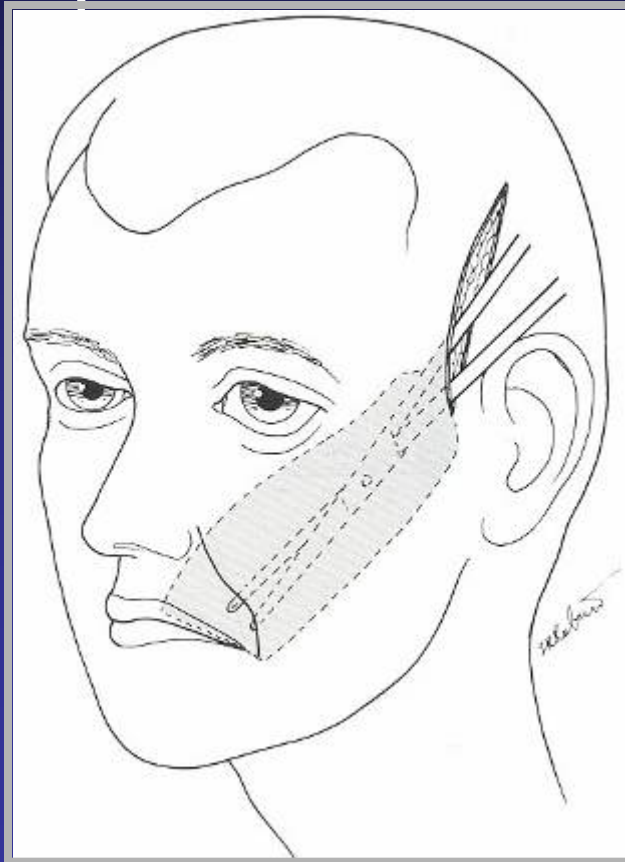
- Regional muscle transfer
- Microvascular free muscle transfer
- Indications
 - Long standing paralysis
 - Abnormal neuromuscular junctions

Replacement of Nonfunctional Facial Muscles

- Regional muscle transfer
 - Temporalis
 - Masseter
- Preoperative evaluation
- Lower 1/3 of the face

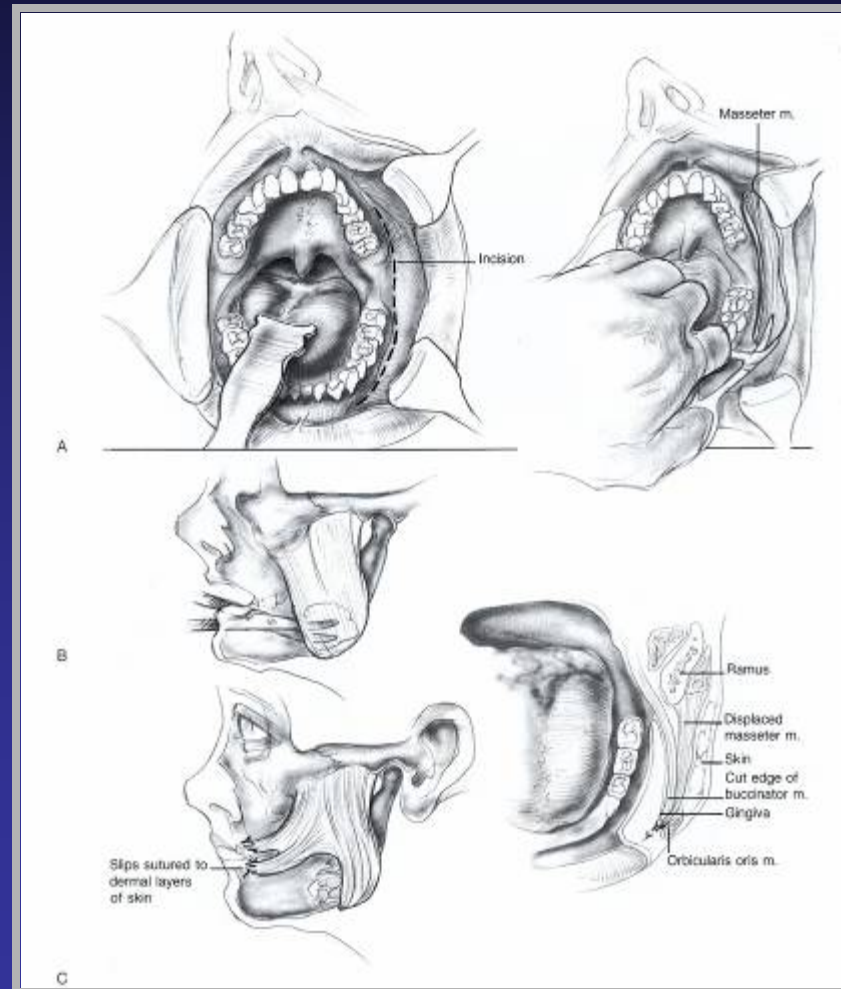
Replacement of Nonfunctional Facial Muscles

- Temporalis muscle transfer



Replacement of Nonfunctional Facial Muscles

- Masseter muscle transfer

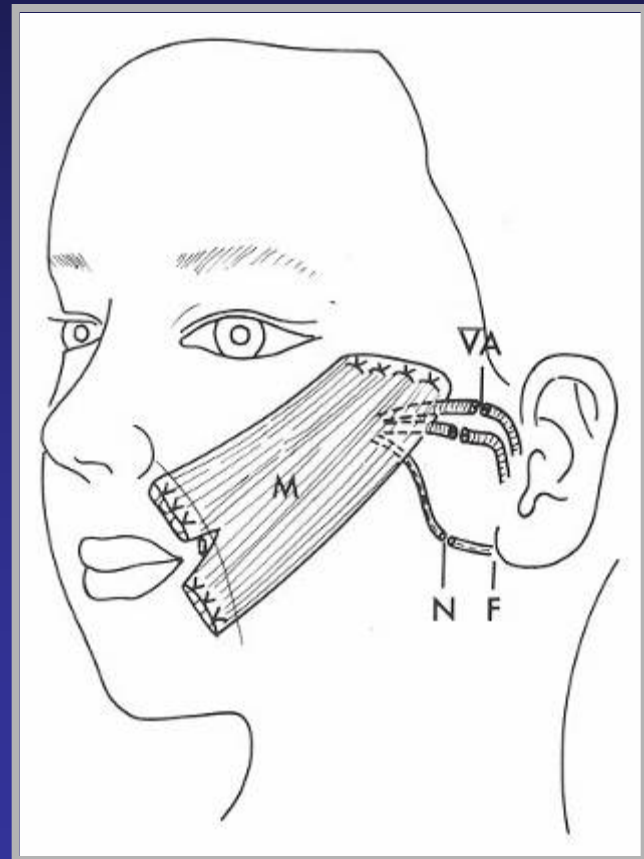


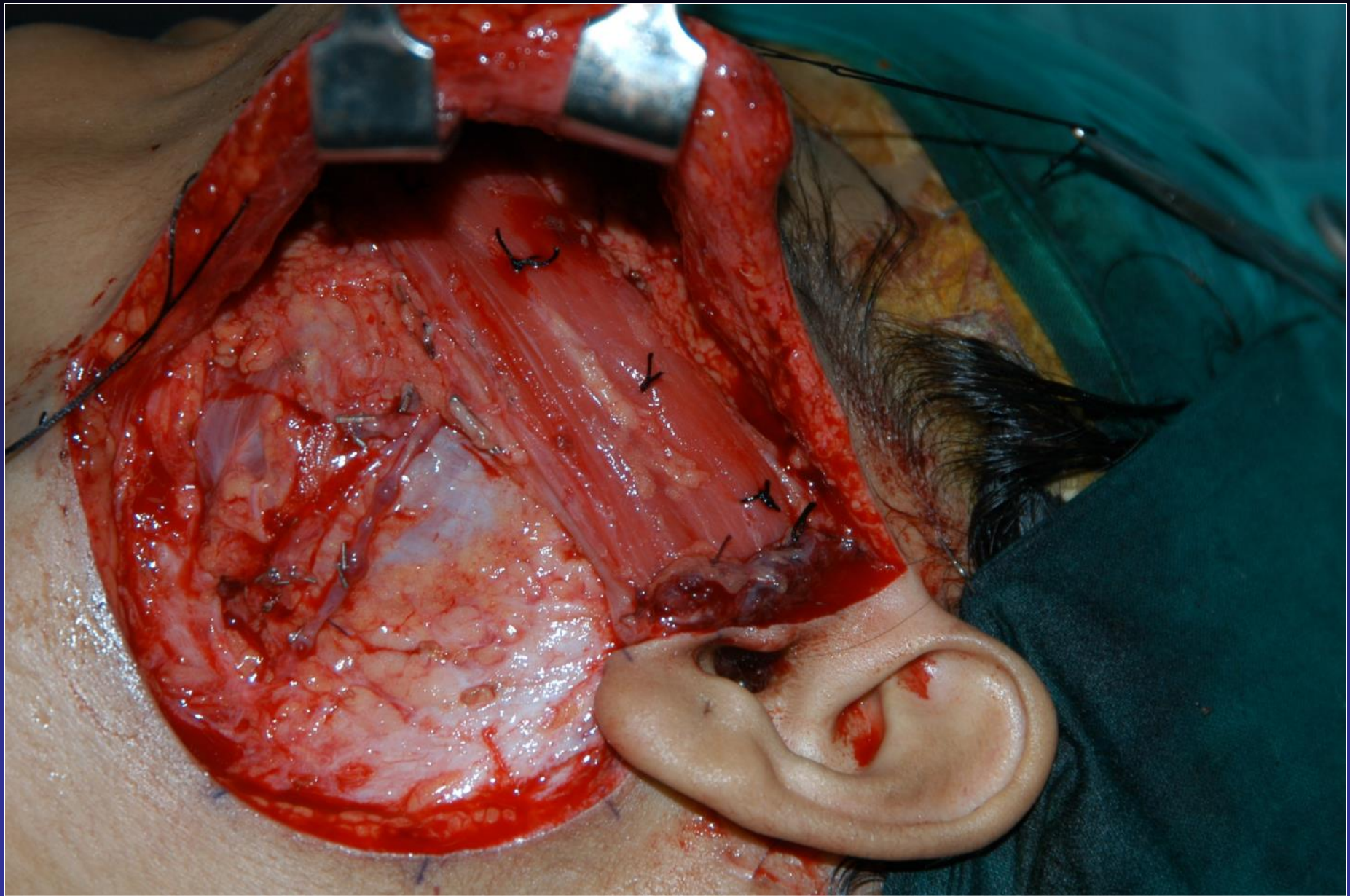
Replacement of Nonfunctional Facial Muscles

- Microneurovascular free muscle transfer
 - Advantages
 - Native facial nerve anastomosis
 - Cross-facial anastomosis
 - Disadvantages
 - Technically difficult, longer OR time
 - Staged procedure
 - Unpredictable voluntary movements

Replacement of Nonfunctional Facial Muscles

- Microneurovascular free muscle transfer
 - Vessels
 - Nerves
 - Facial (interposition)











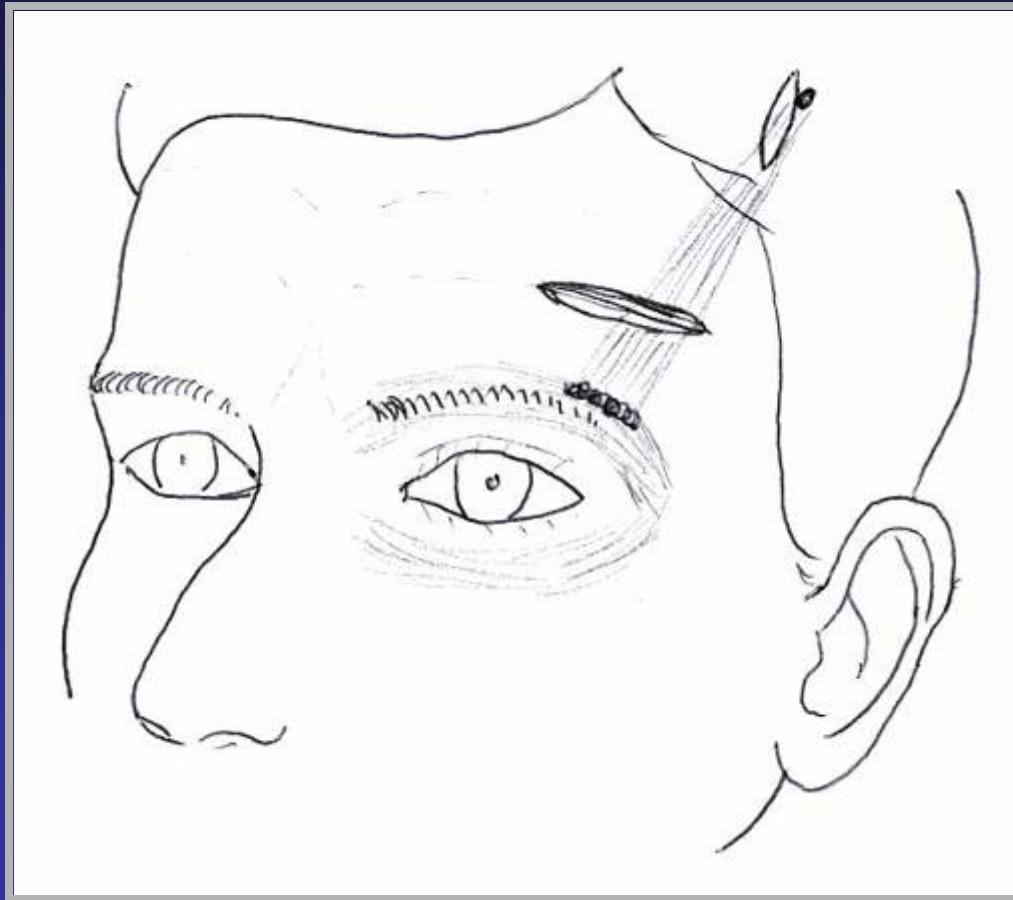
Static Resuspension of Facial Tissue

- Static elevation of the drooping paralyzed face
 - Cosmetic
 - Functional
- Indications
 - Patient factors
 - Temporary while awaiting return of nerve function

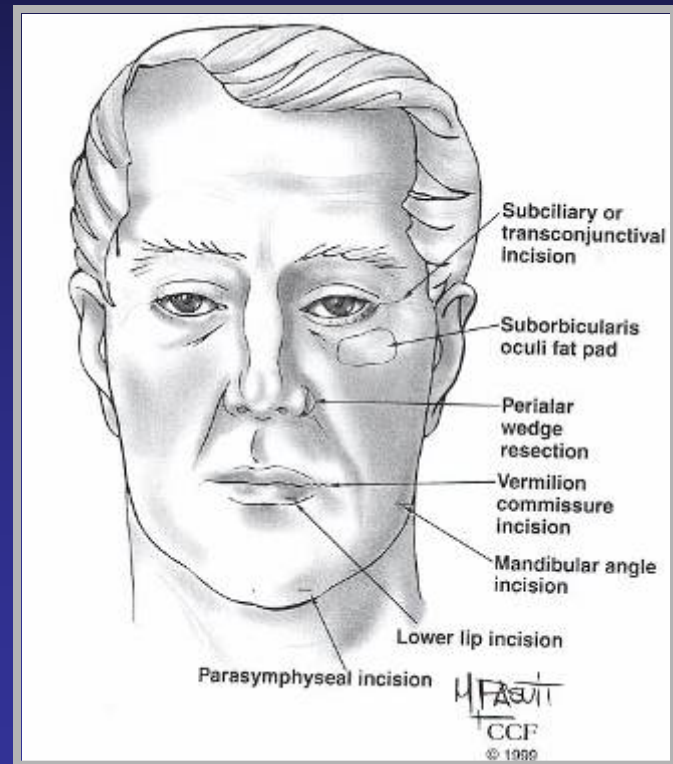
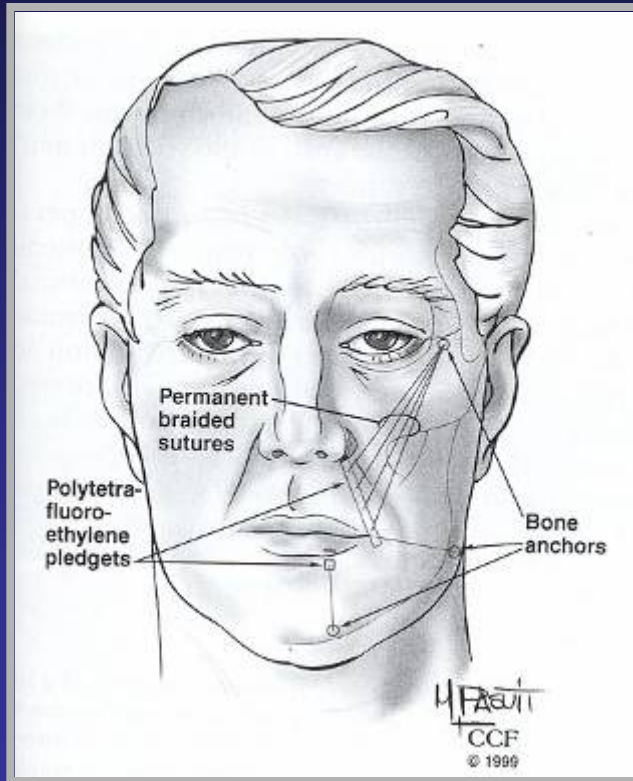
Static Resuspension of Facial Tissue

- Fascia
 - Fascia lata
 - Donor site morbidity
 - Increased OR time
 - Tendency to stretch over time
 - Decreased infection or extrusion
- Synthetic materials
 - Gore-Tex
 - Alloderm
 - Technically easy
 - No donor site
 - Less stretch over time
 - Increased risk of infection and extrusion

Static Resuspension of Facial Tissue



Static Resuspension of Facial Tissue



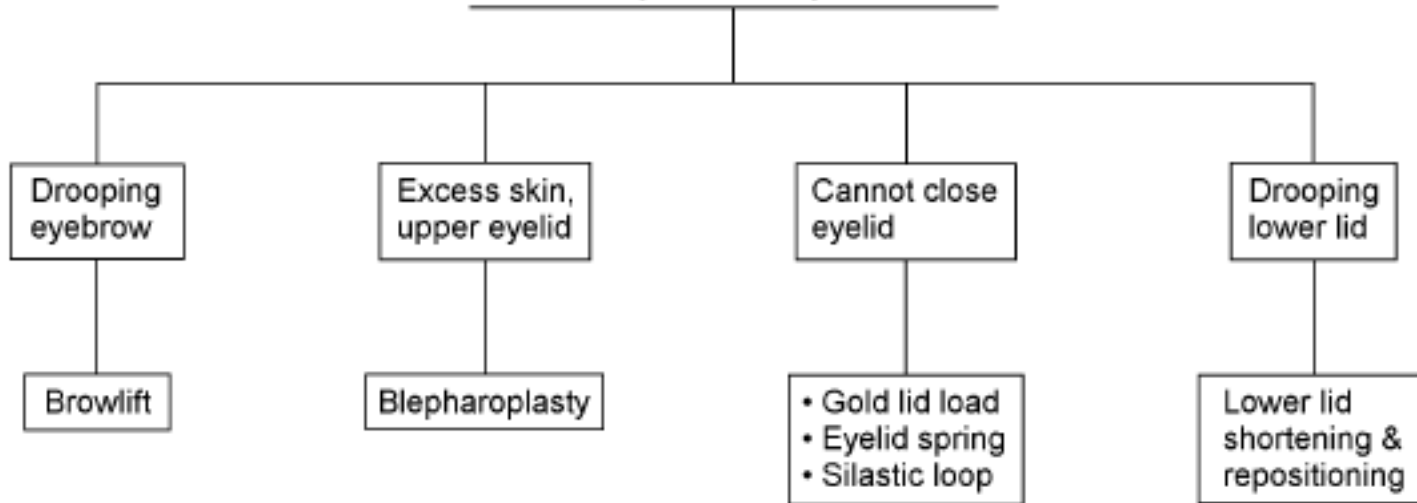
Adjunctive Procedures

- Upper third of the face
 - Gold weight implant
 - Palpebral spring
 - Lower lid shortening
 - Tarsorrhaphy
 - Brow lift
- Lower third of the face
 - Lower lip wedge resection
 - Rhytidectomy



Summarising.....

Facial Paralysis — Temporal Branch



Facial Paralysis — Zygomatic, Buccal, and Marginal Mandibular Branches

