

Oculoplastic issues in Ocular trauma

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WHAT IS OCULOPLASTIC SURGERY?

Oculoplastic surgery

- Management of defects and deformities of:
- Eyelids
- lacrimal system
- orbit

Oculoplastic surgery

- aesthetic surgery performed around the eyes
- reconstructive surgery for:
 - trauma,
 - infection
 - excision of neoplasia

30 year old



40 year old



Oculoplastic issues

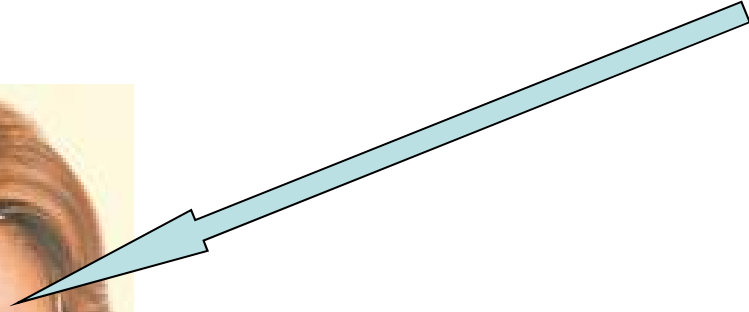
60 year old



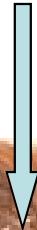
Morphologic changes associated with eyelid aging:

- Diminished thickness and elasticity of the skin
- Gradual absorption of subcutaneous tissue
- Decreased skin adherence to underlying layers
- Gravitational descent of soft tissues
- Formation of skin folds along the lines of skin adherence and in areas of muscular insertion.

Brow lift to remove abnormally sagging frontal furrows

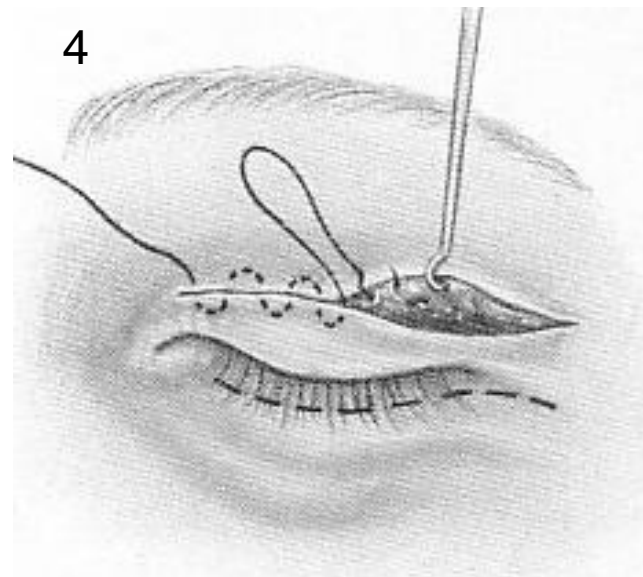
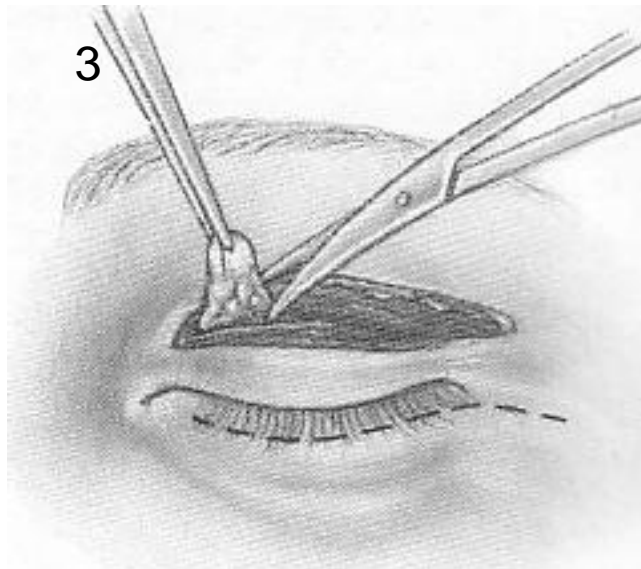
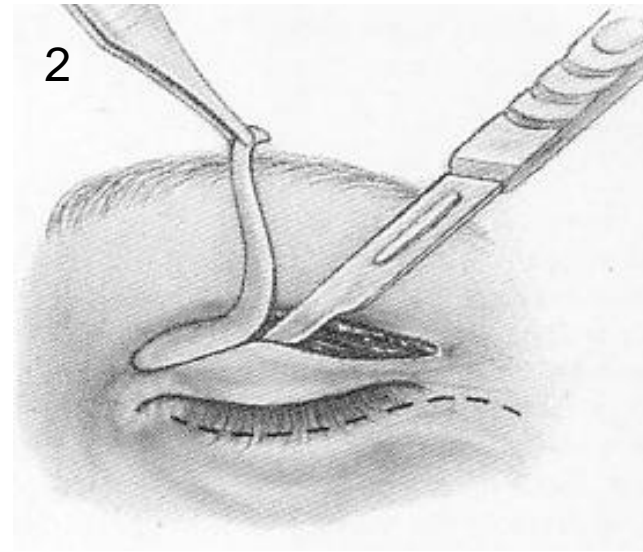
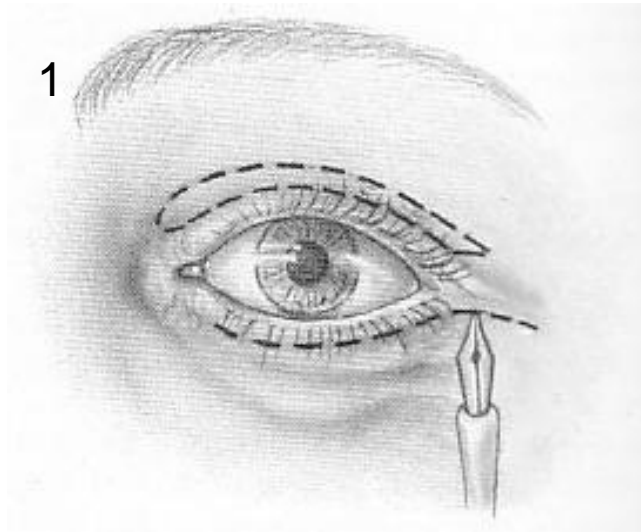


Incision is hidden behind hair line



Oculoplastic issues

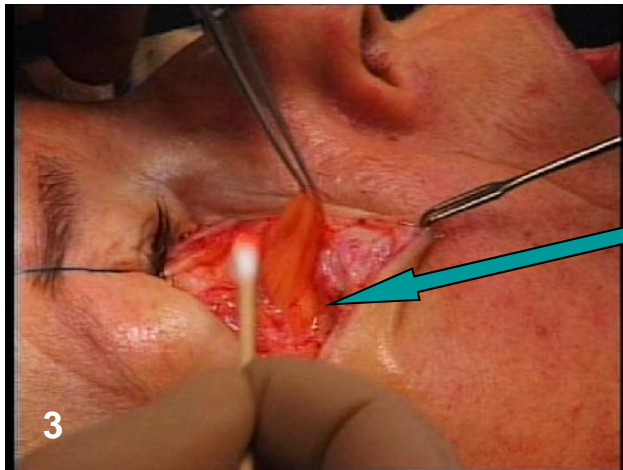
Blepharoplasty: upper eyelid



Blepharoplasty: lower eyelid



Extent of undermining

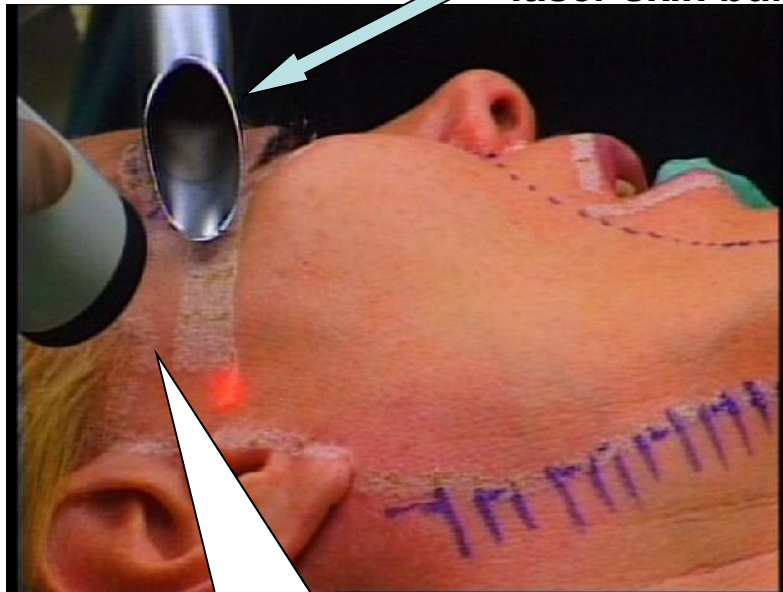


Trimming of excess fat and skin

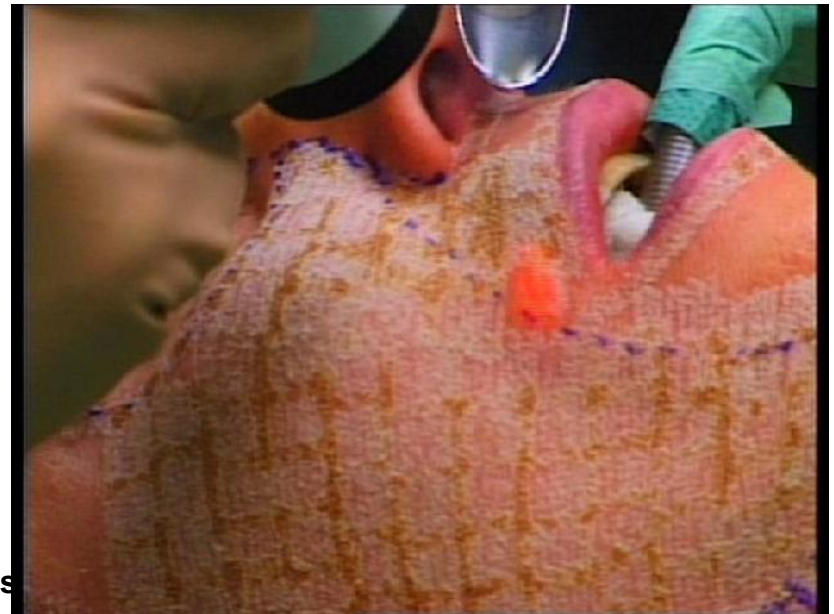


Pulsed carbon dioxide laser therapy to smoothen out facial wrinkles

Cannula absorbs smoke produced by laser skin burn



Gadget delivers laser beam which "burns" the superficial layer of skin



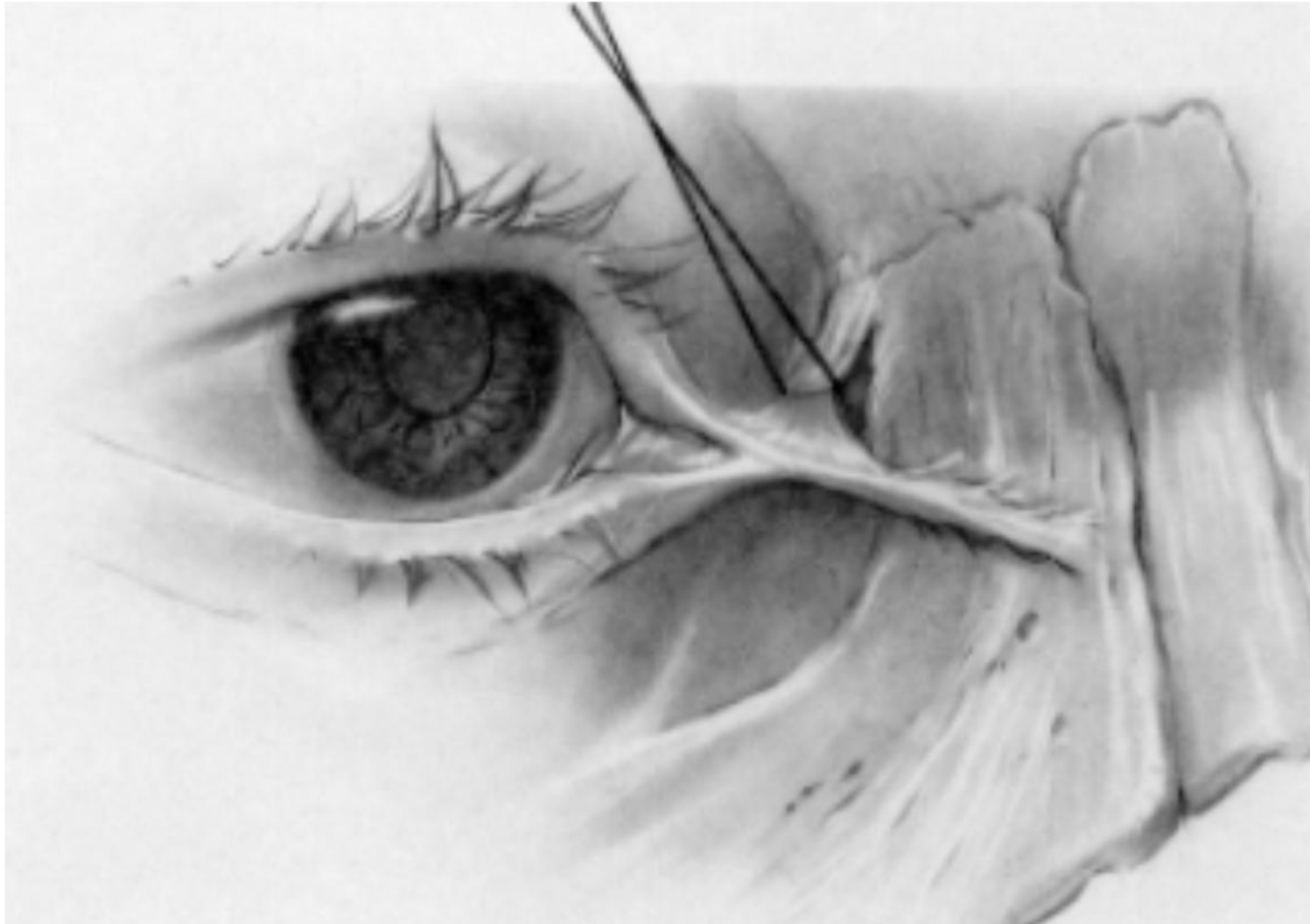
Oculoplastic issues

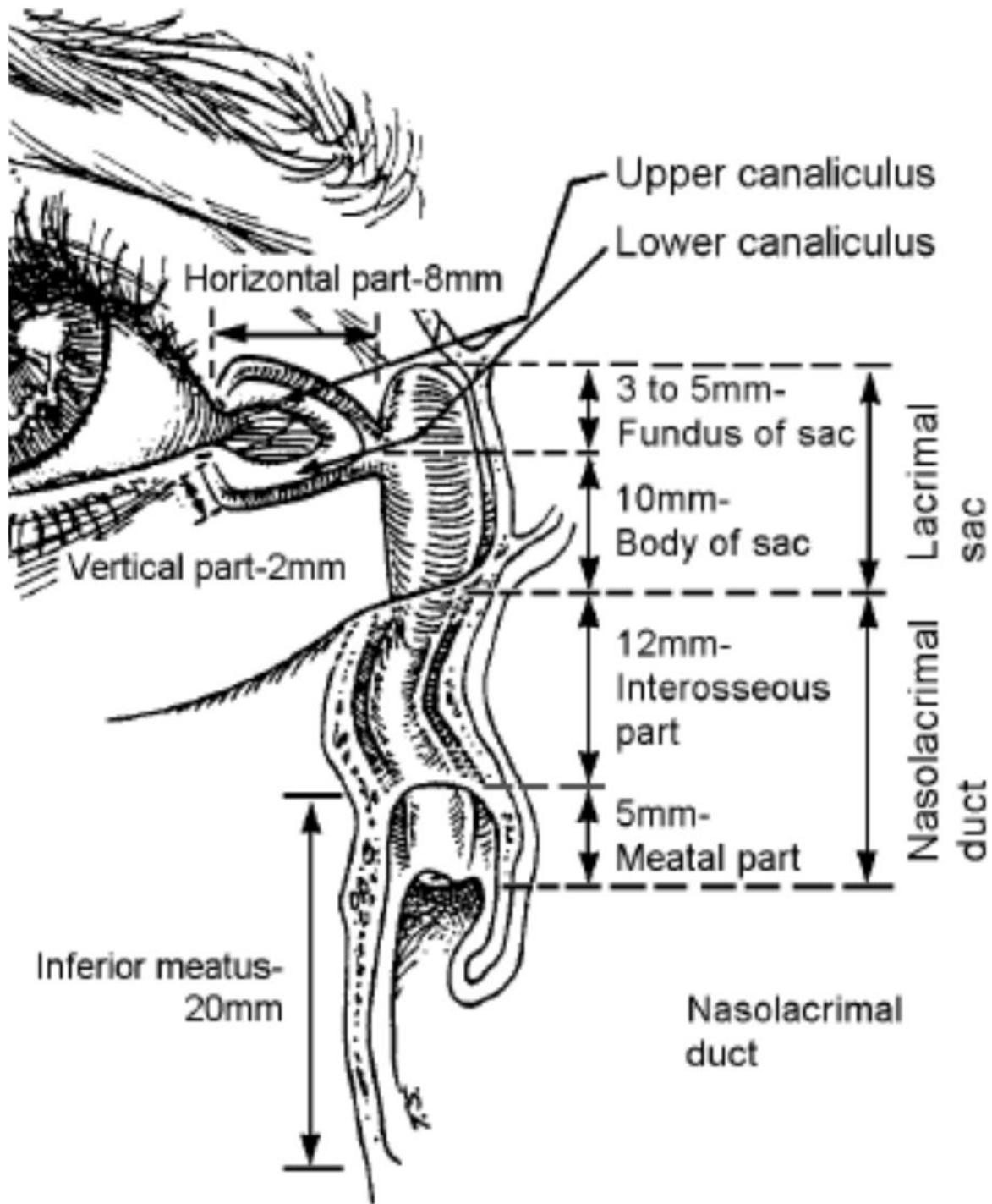
ANATOMY

Mersey Regional Burns and Plastic Surgery centre at Whiston Hospital

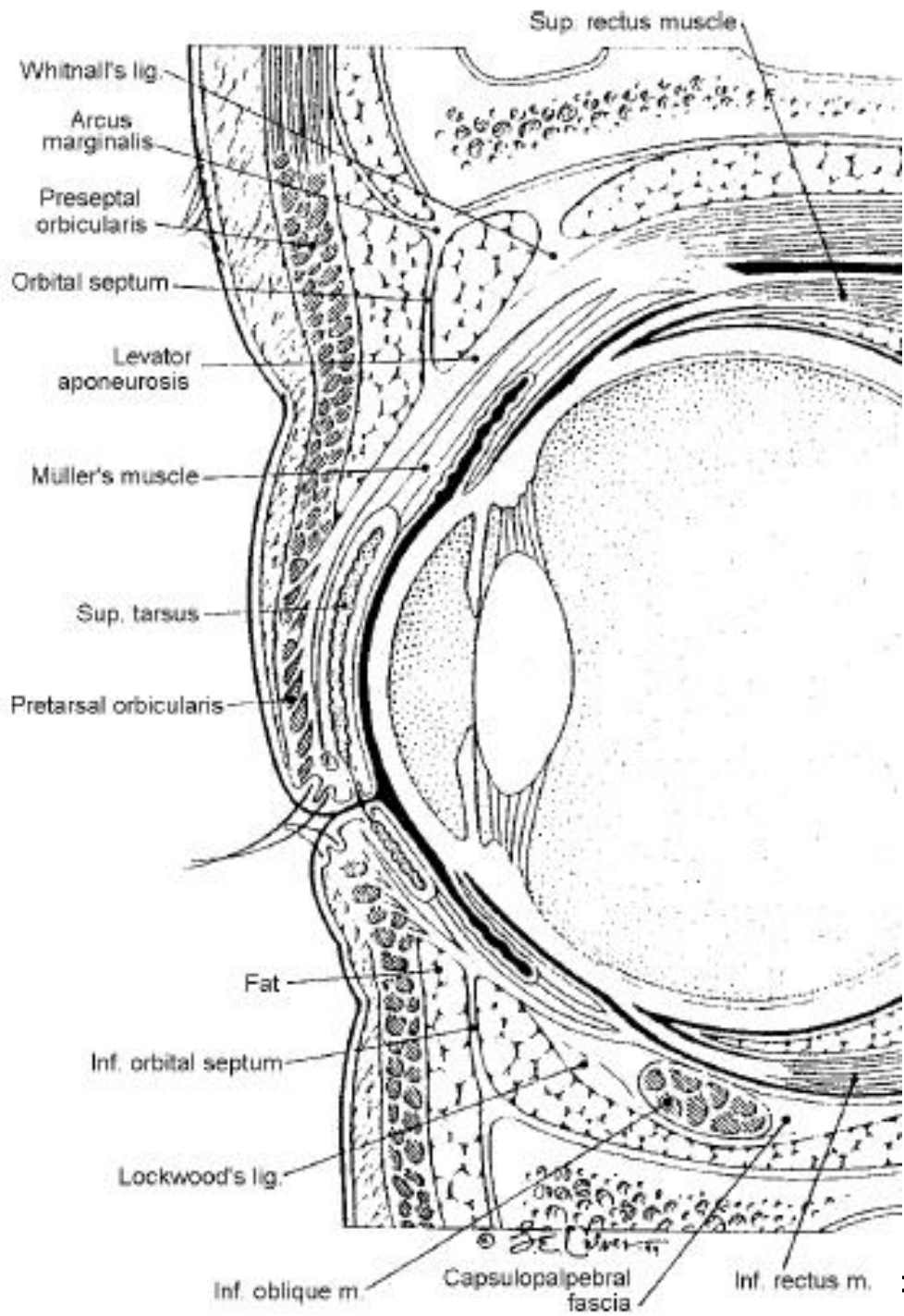


The suture surrounds the strong vertical component of the medial canthal complex.



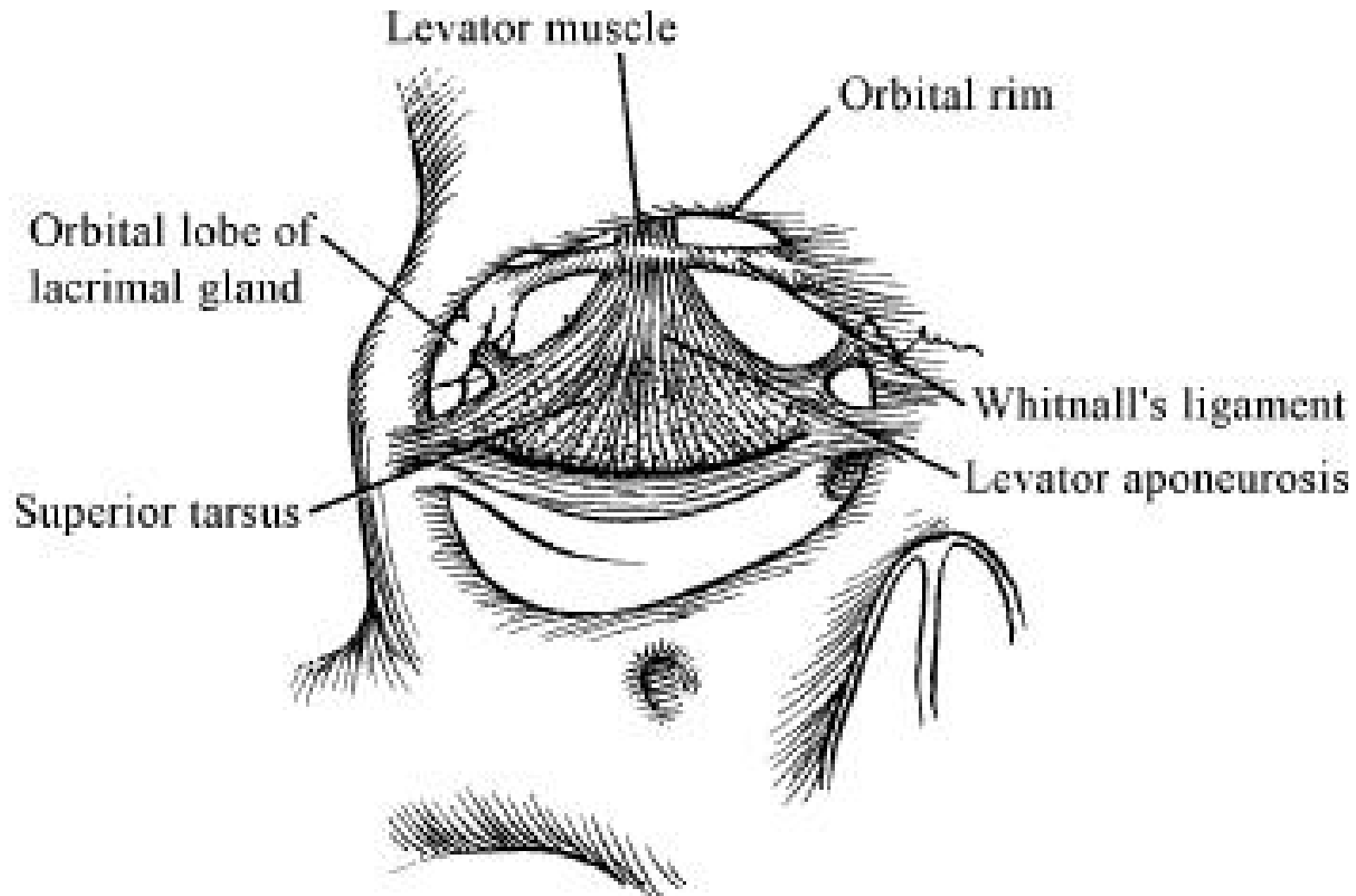


Lacrimal excretory passage

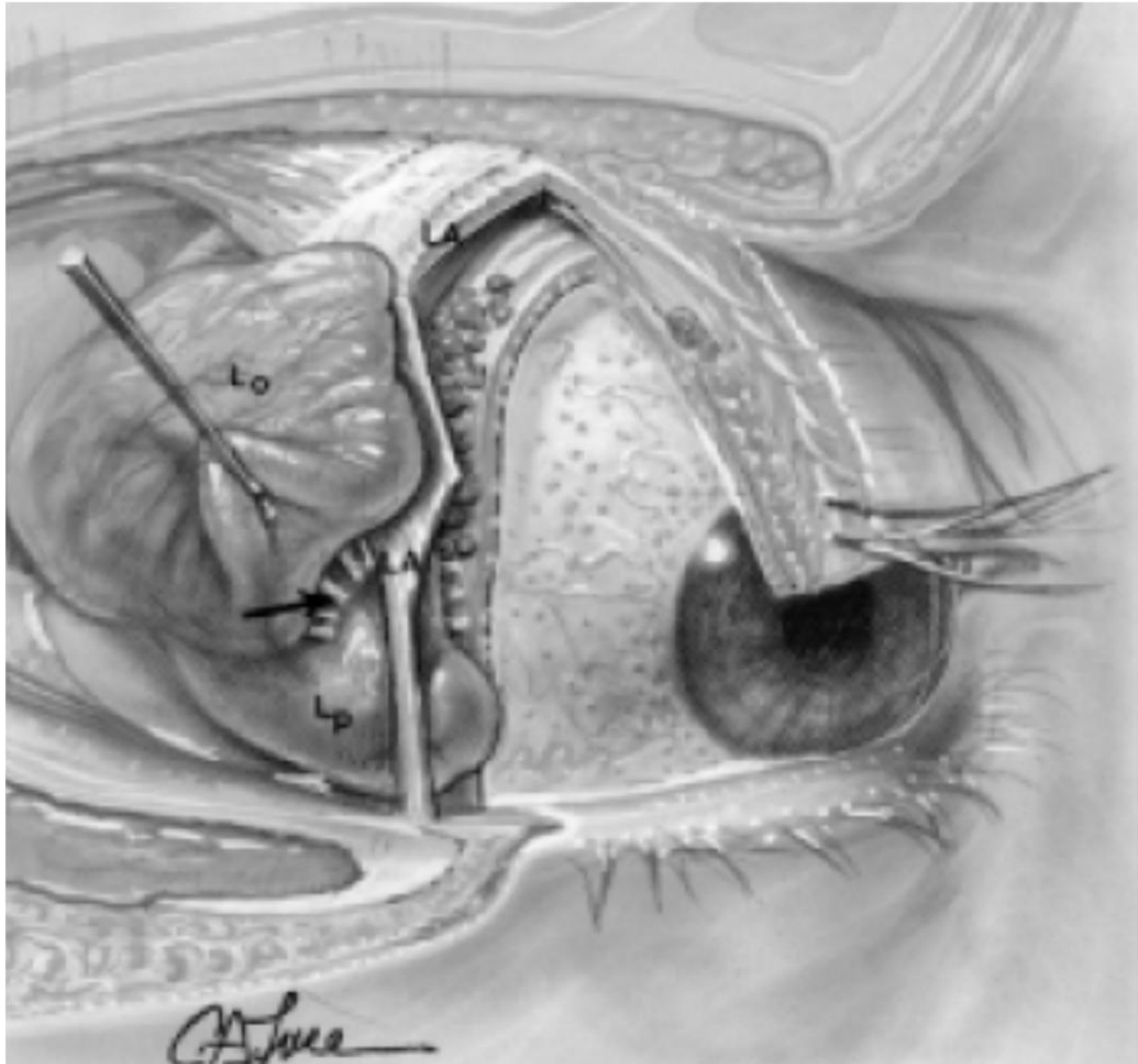


Anatomy of the eyelid in sagittal section

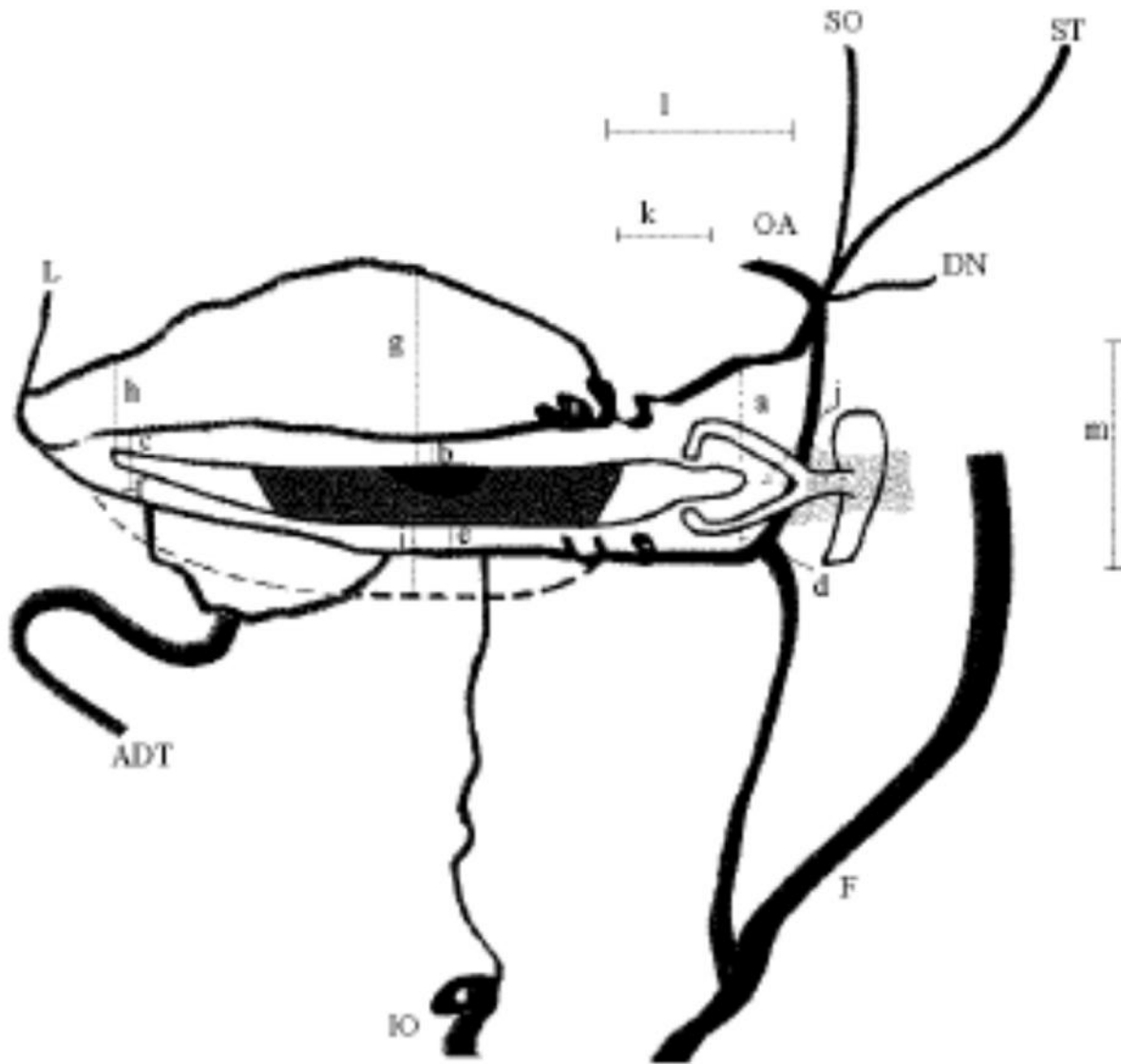
Anatomy of the levator muscle and aponeurosis



The main lacrimal glands are divided into an orbital lobe (Lo) and a palpebral lobe (Lp) by the lateral horn of the levator palpebrae superioris (LA)



Blood supply of the eyelids



INDICATIONS FOR OCULOPLASTIC SURGERY AFTER OCULAR TRAUMA



A
Passenger thrown
up and forward
through windshield

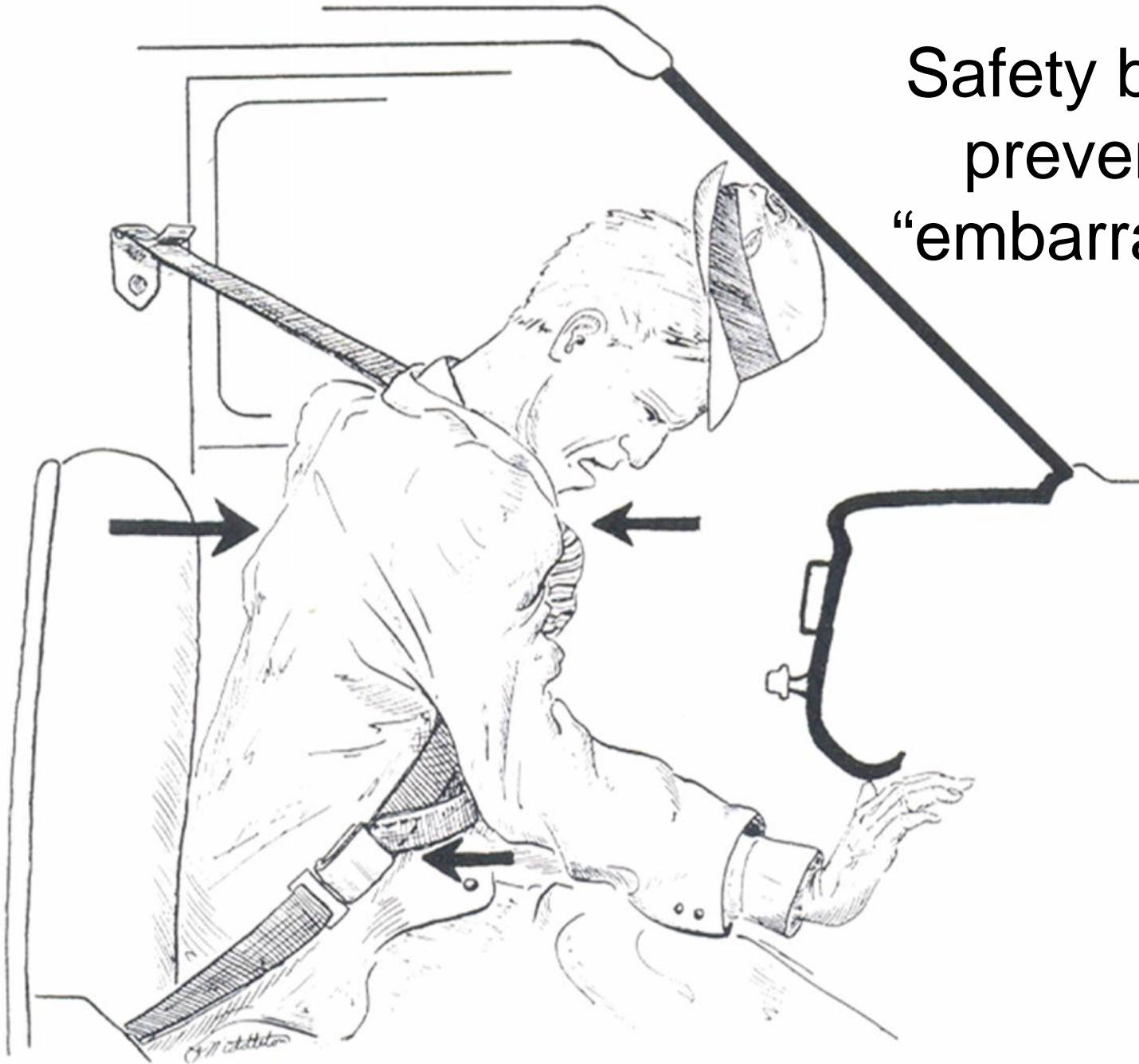


B
Passenger thrown
back and down into
front seat after for-
ward momentum has
stopped



C
Tangential forces
create avulsion flaps

A mechanism of facial soft tissue injury in auto accidents



Safety belt often prevents the “embarrassment”

Careless lantern
refill is a very
common source
of explosion/
burn that affects
the eyelid



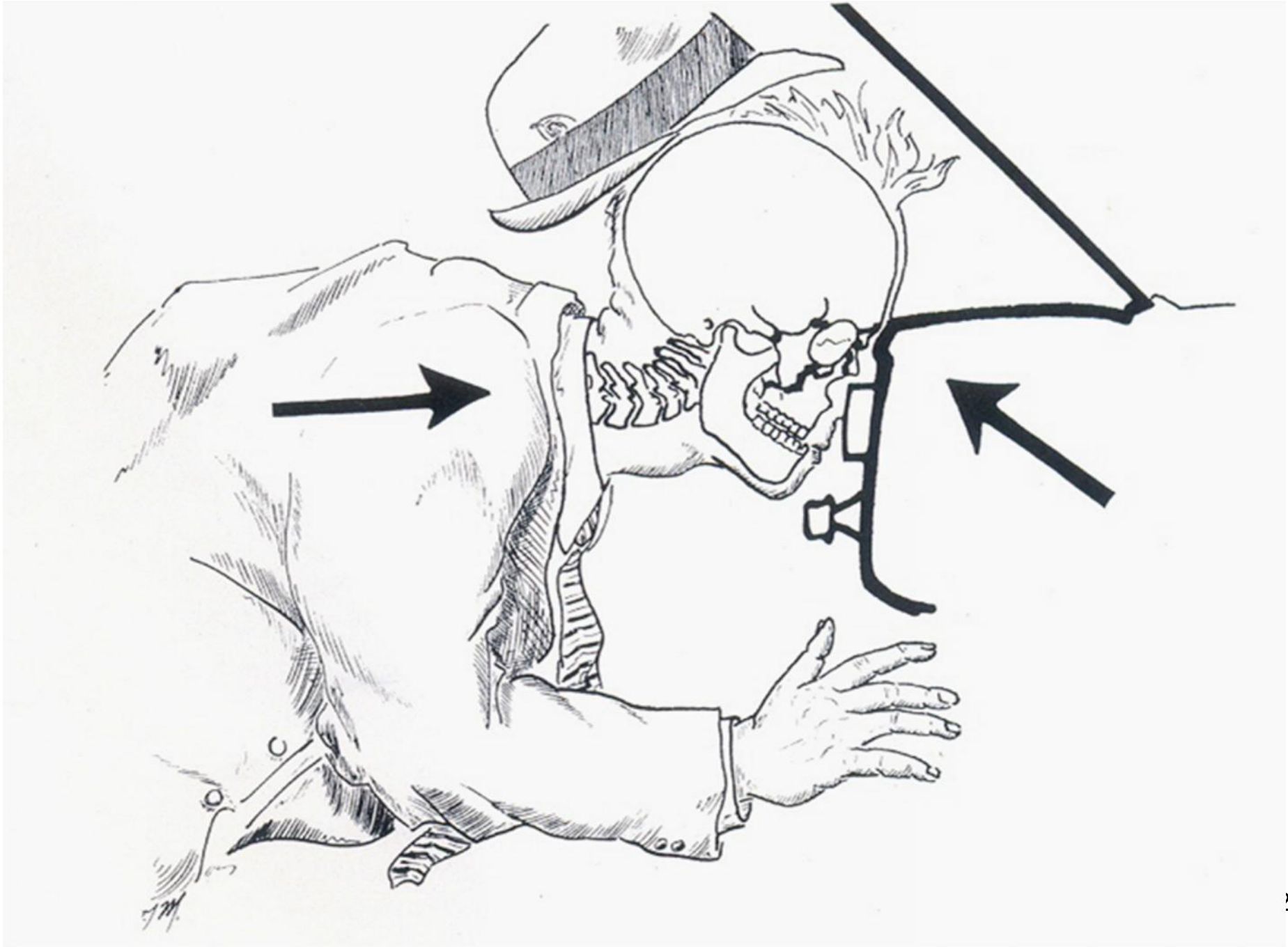


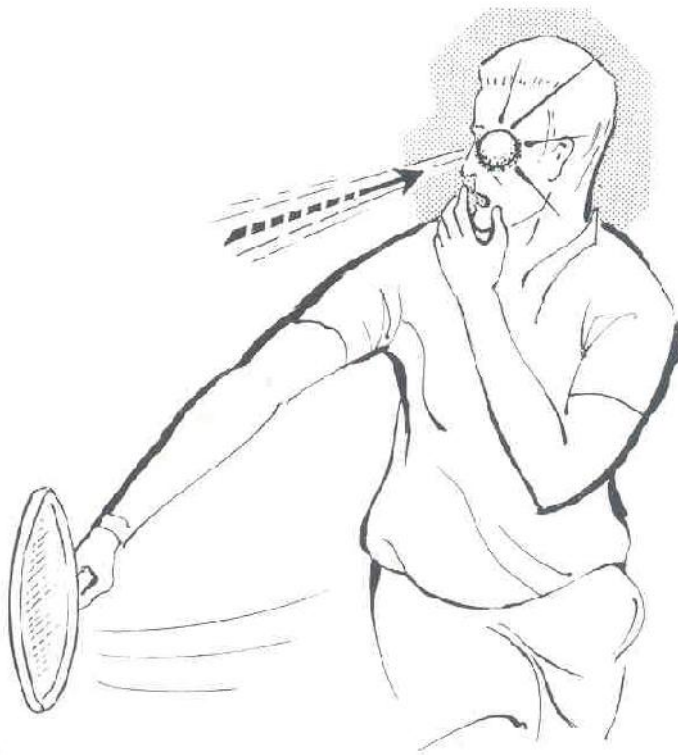
Oculoplastic issues



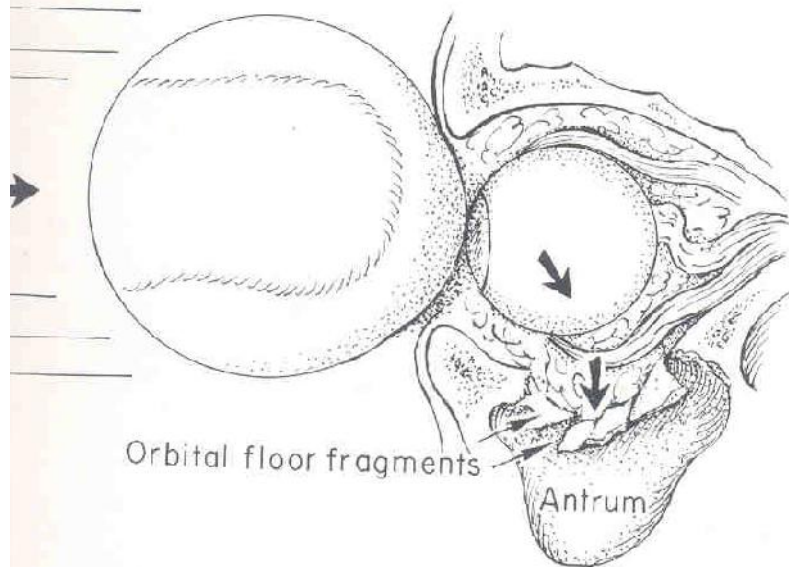
Chemical
assault

Mechanism of facial skeletal fracture in auto accidents





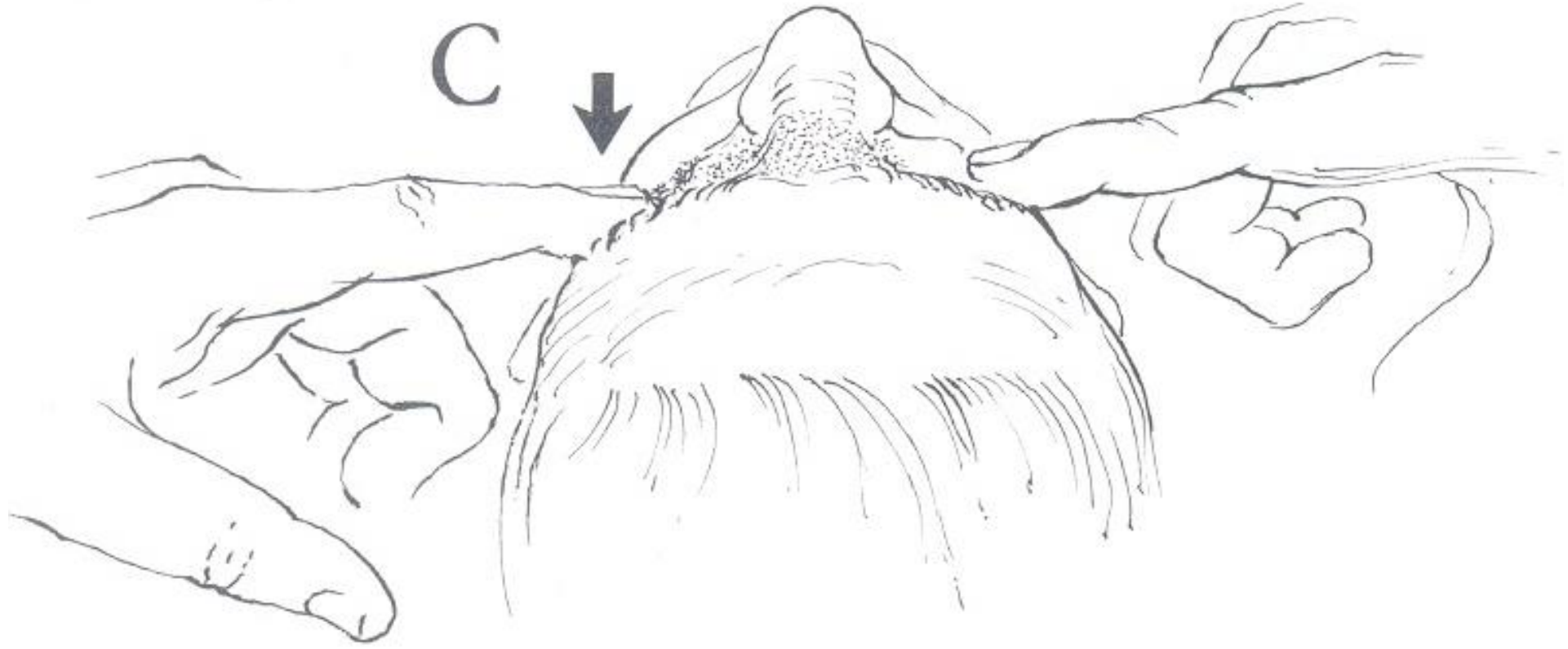
Mechanism of orbital blow out fracture





Lacrimal fractures can occur from domestic accident

Comparing height of Malar eminences





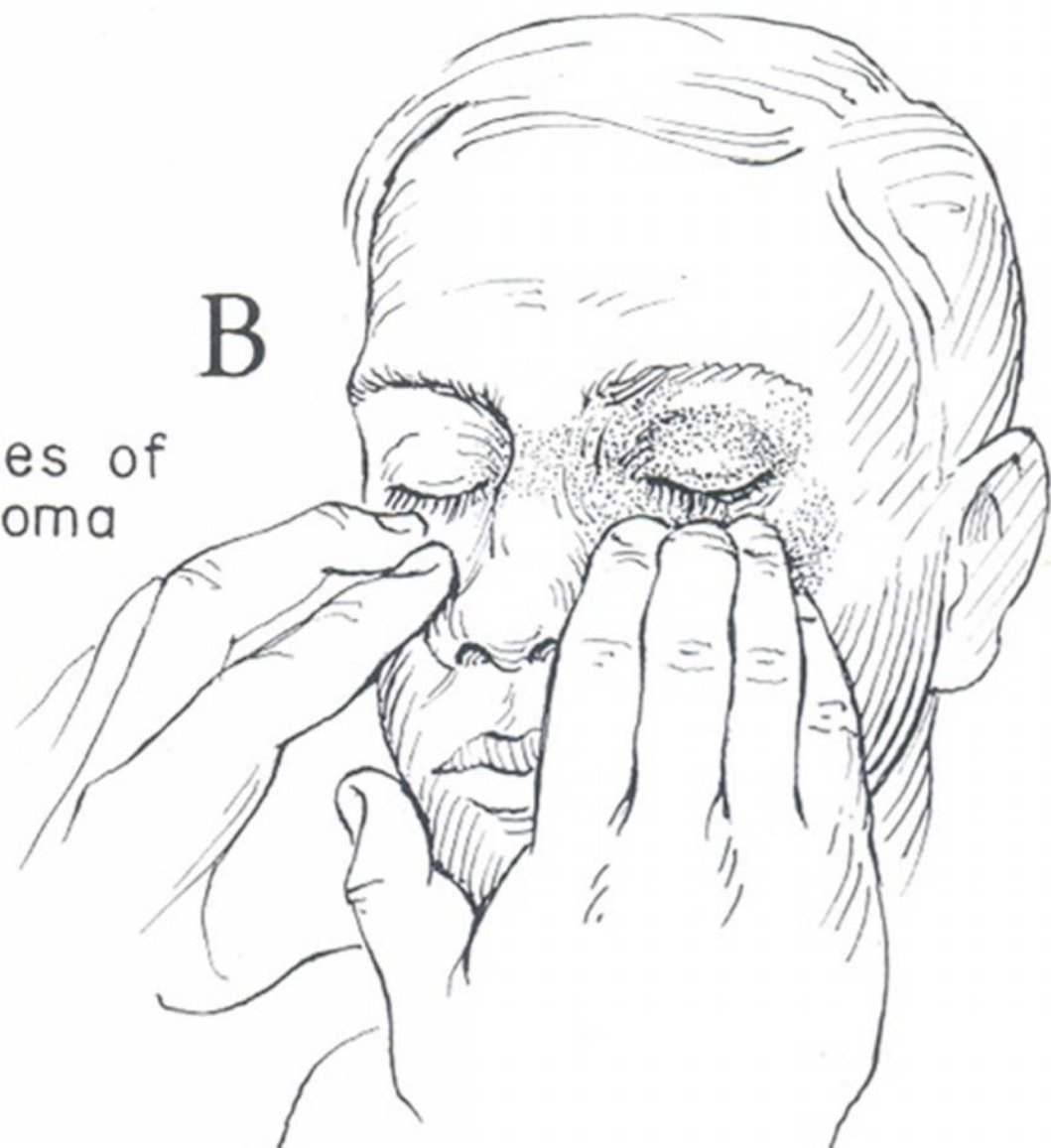
A

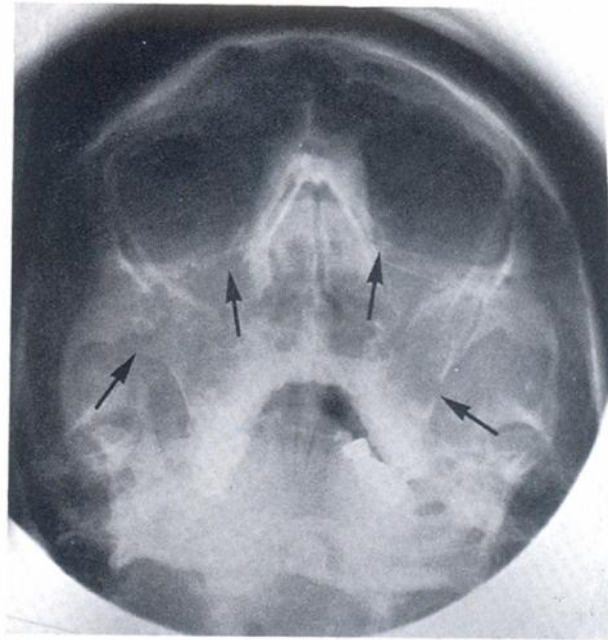
Palpation for irregularities
of supraorbital ridge



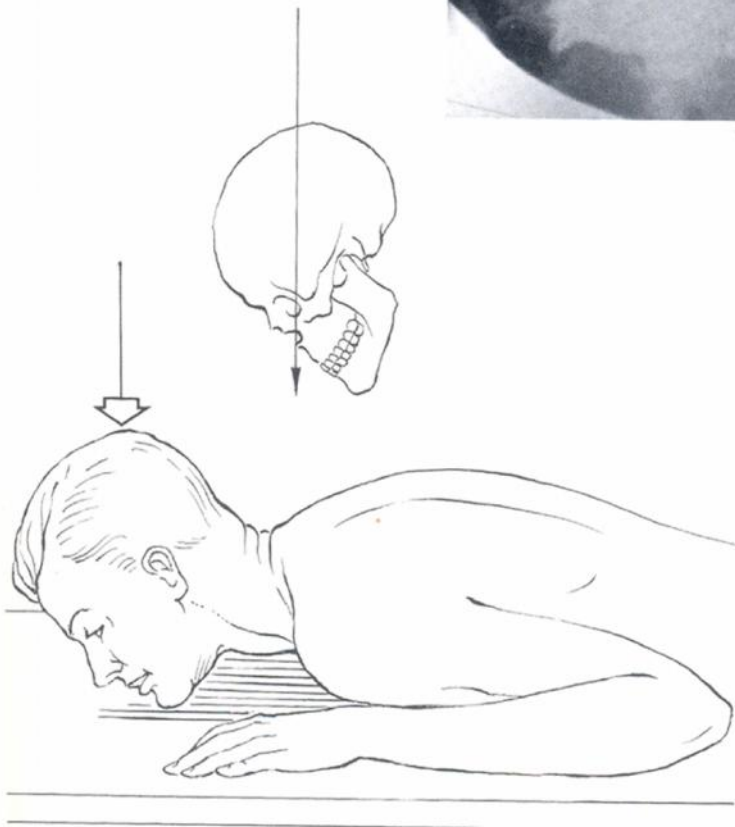
Palpation for irregularities of
infraorbital ridge and zygoma

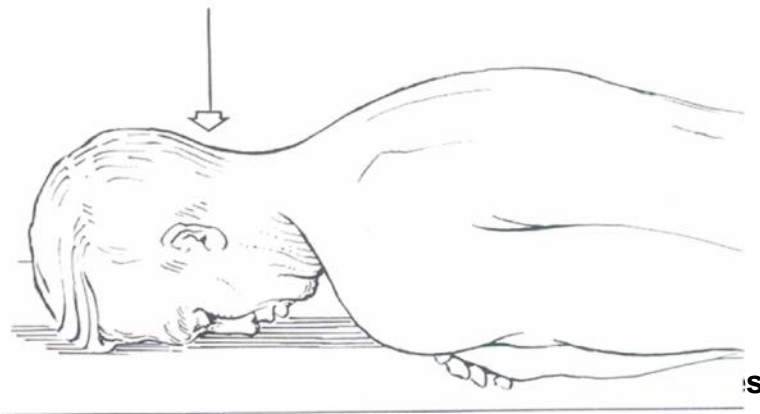
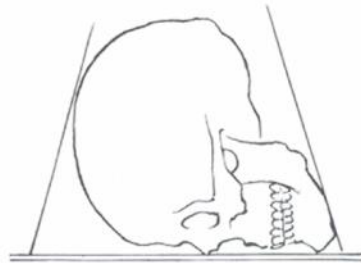
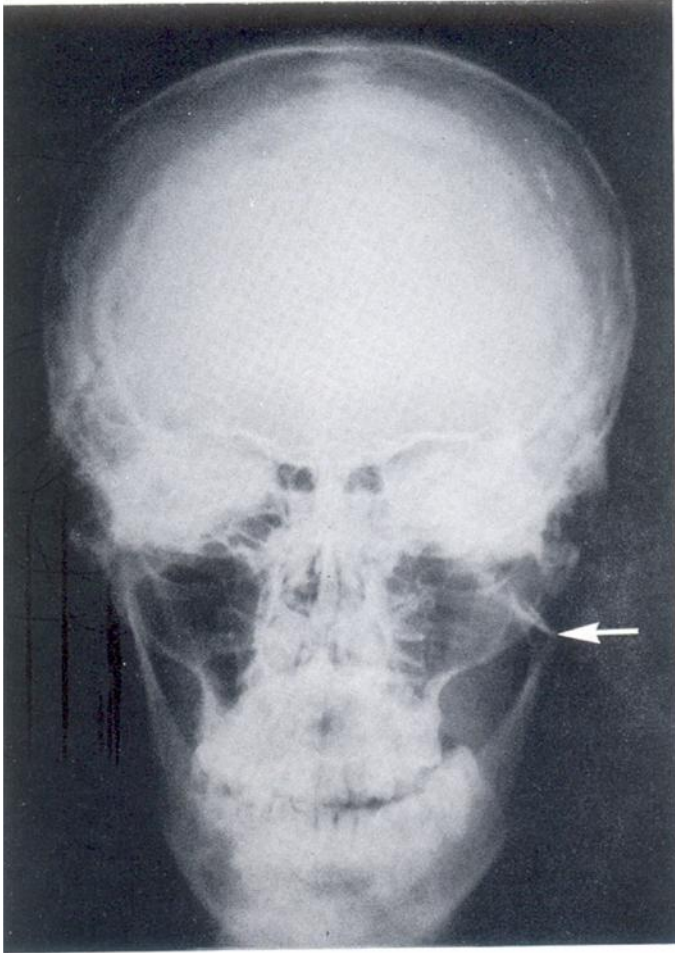
B



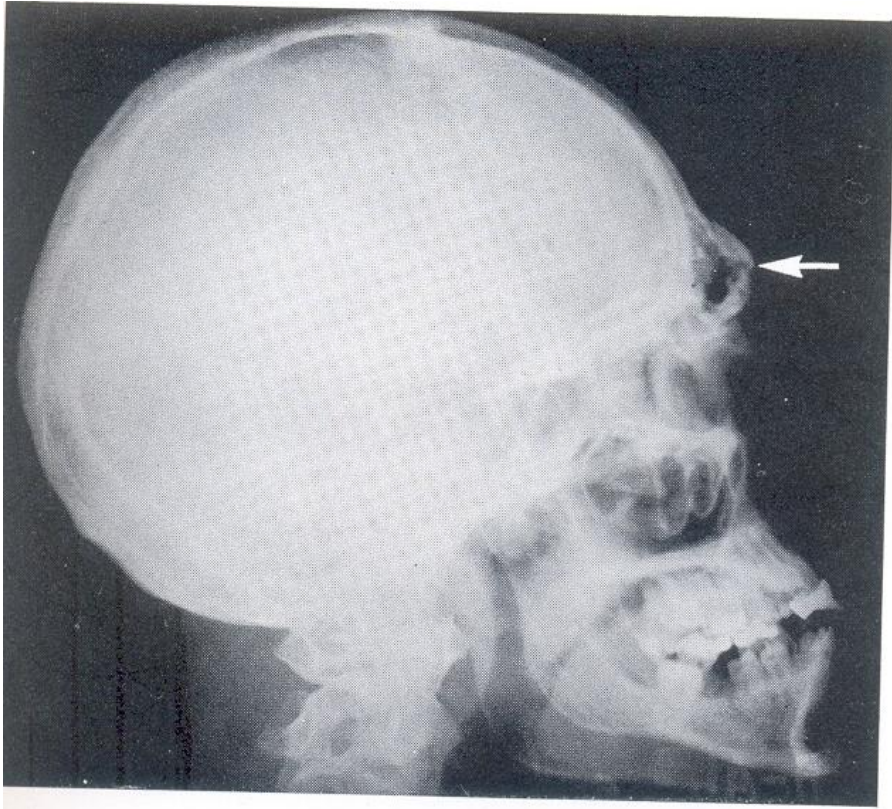


Waters
(occipito-mental)
view

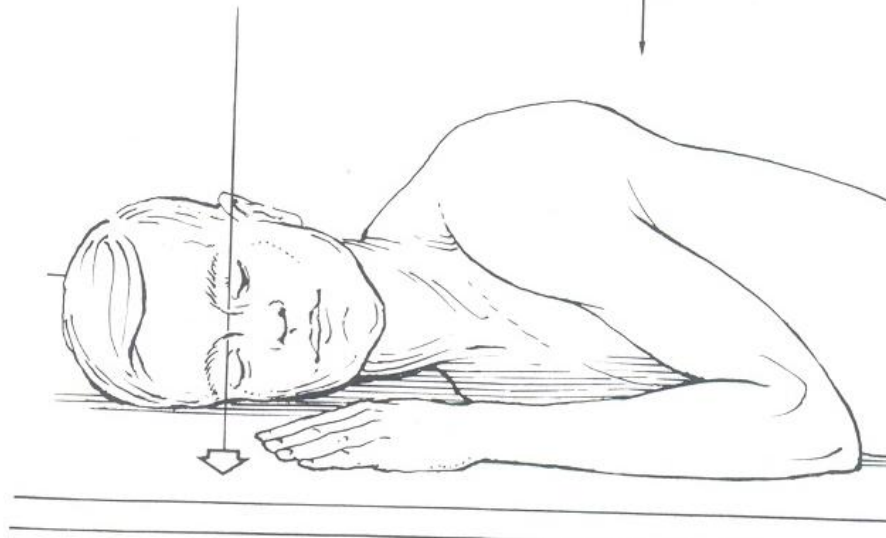
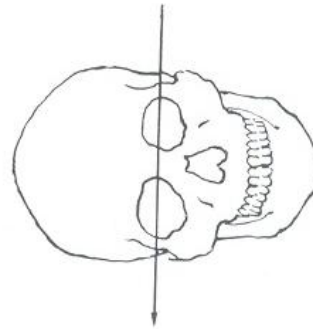




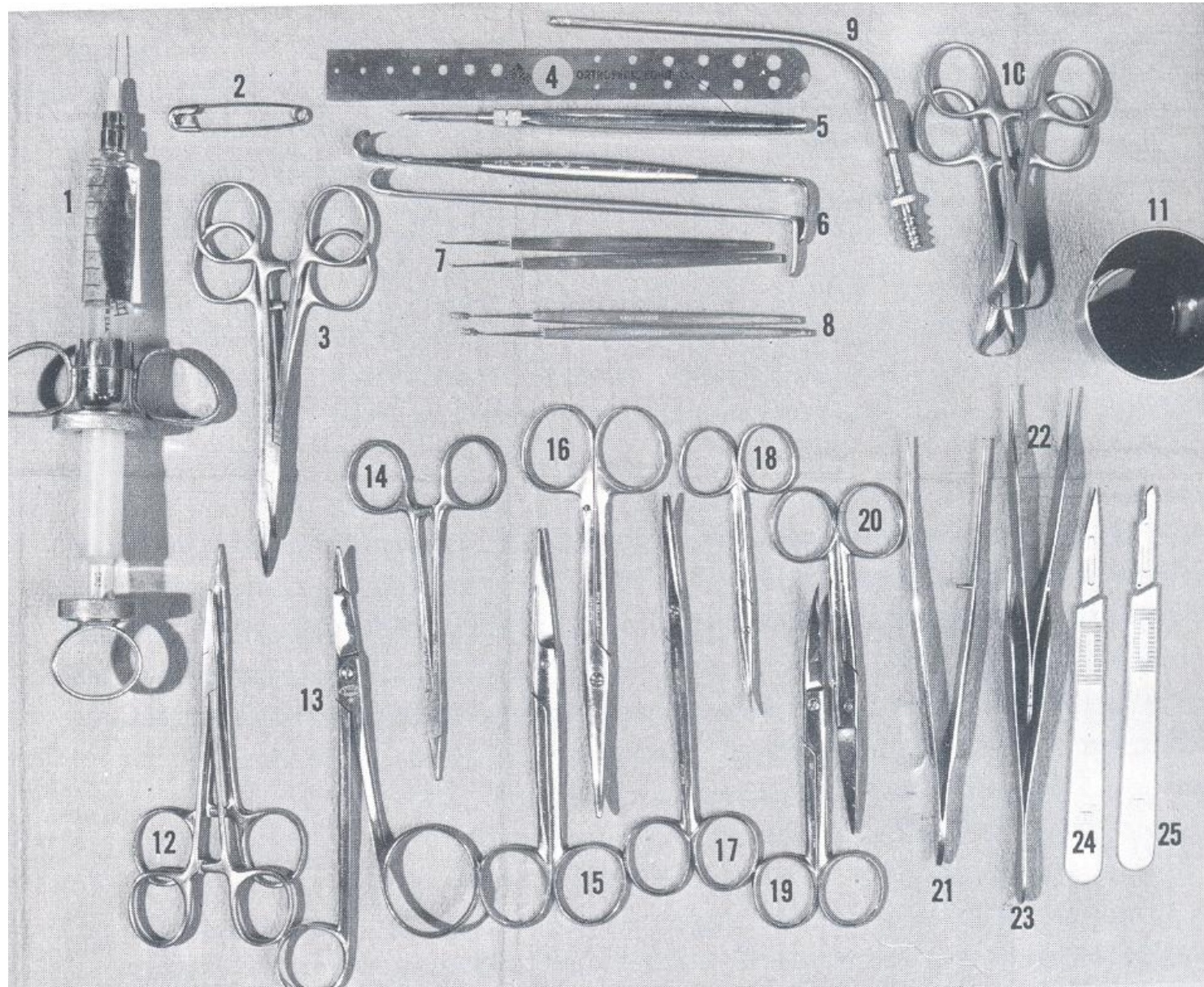
Posterior
anterior view



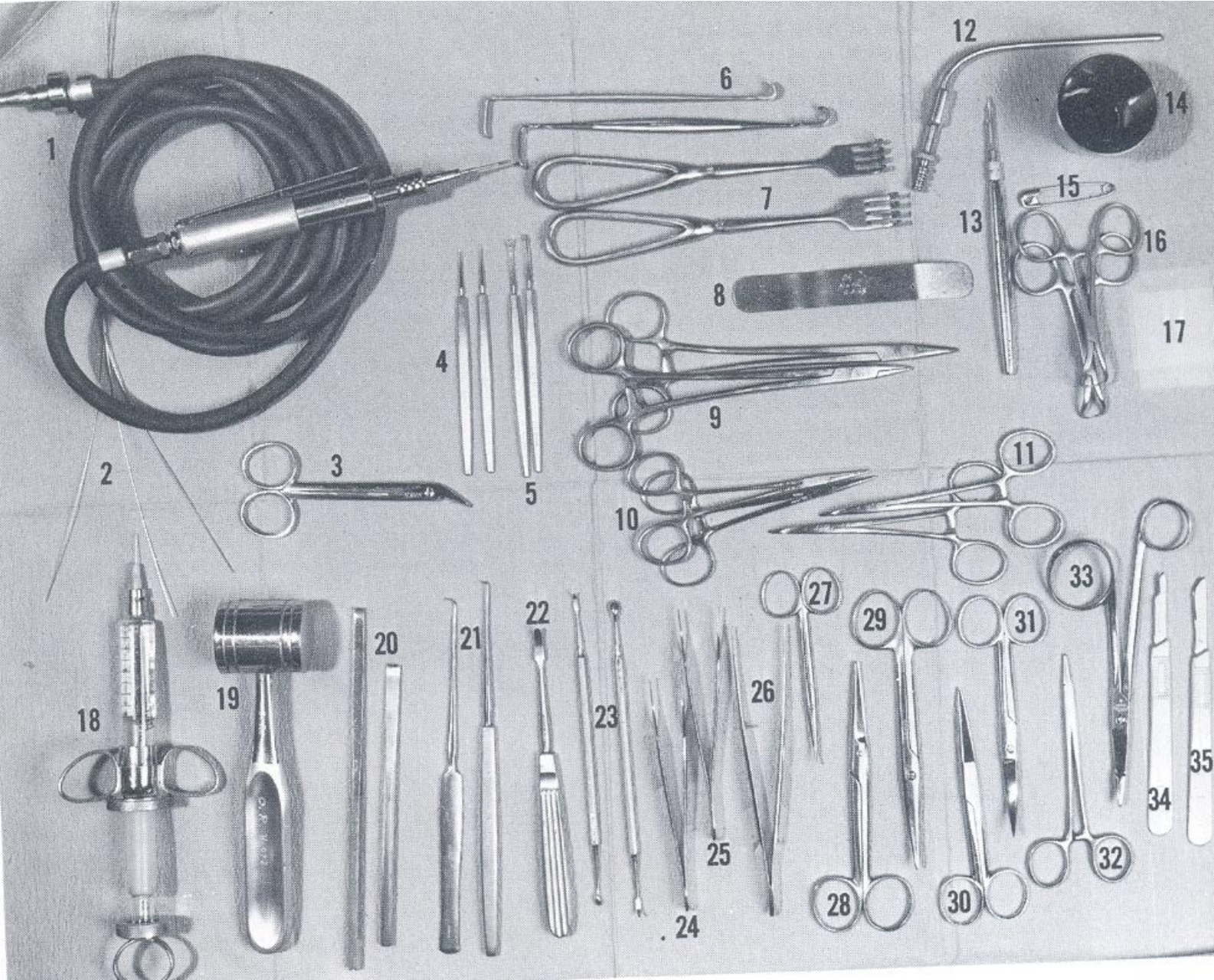
Lateral view of facial bones

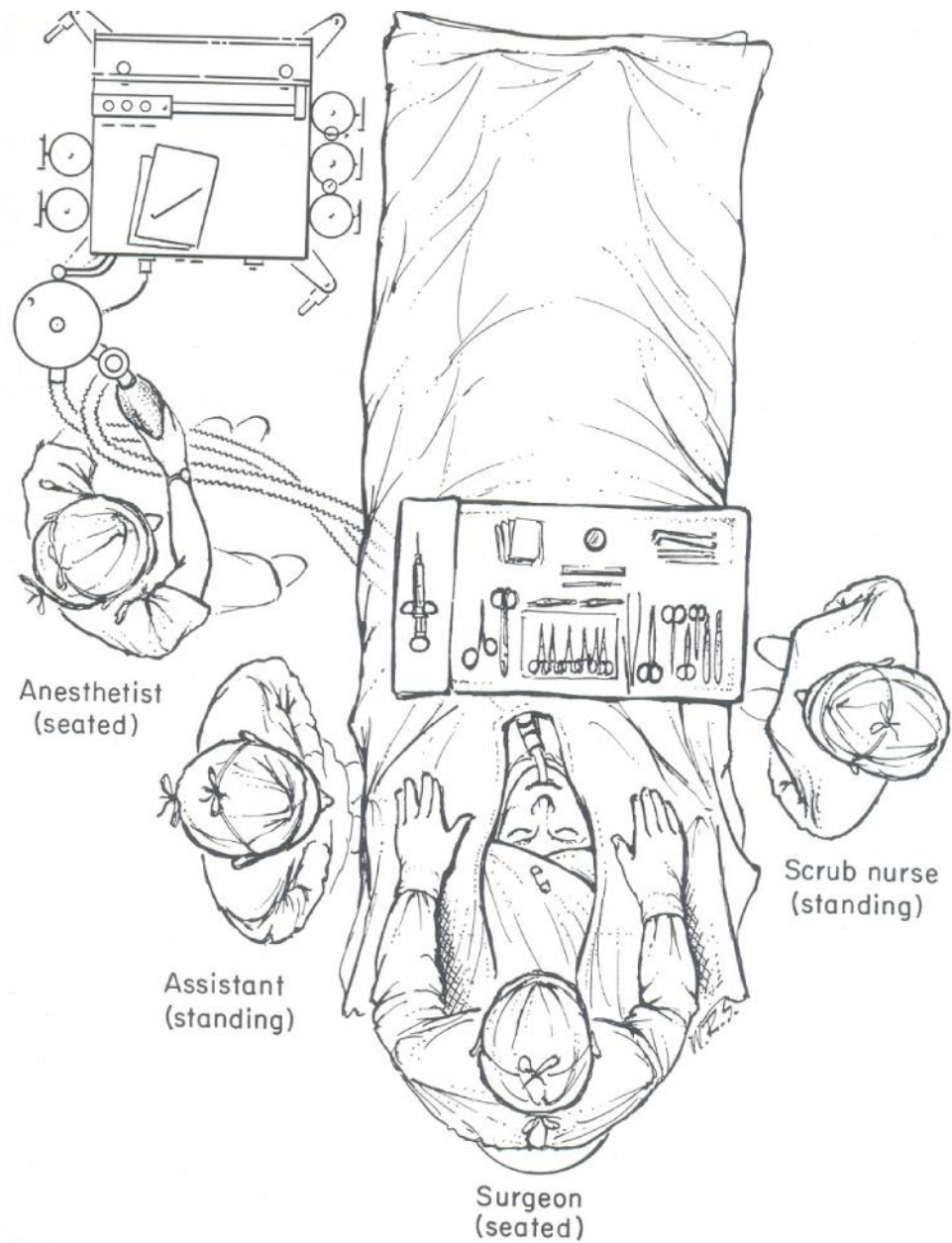


Basic tray of instruments for soft tissue repair.



Instruments for open reduction of orbital fractures

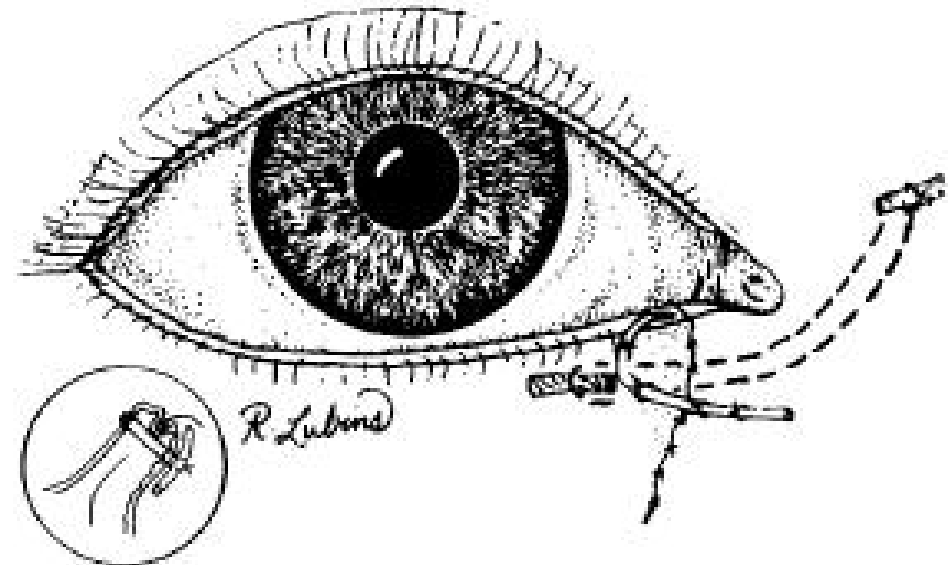
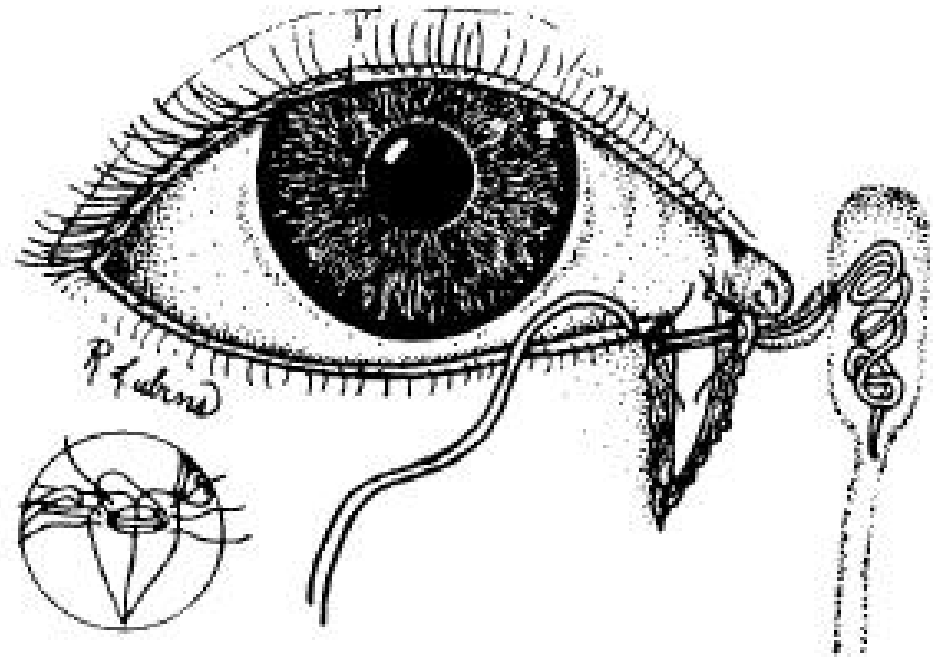




- **Challenges of some eyelid lacerations**
 - canalicular repair
 - ptosis surgery
- **Lid defects**
 - principles of lid reconstruction
- **Fixation of orbital and periorbital fractures**
- **Some sequelae of inappropriate treatment**
 - ectropion
 - symblepharon etc
 - other unsightly scars

CHALLENGES OF SOME EYELID LACERATIONS

Canalicular repair with
simple monocanalicular
stent



Classification of Upper Eyelid Ptosis

Mild Ptosis

- 2 mm droop
- 8-16 mm of levator excursion
- levator function considered good

Moderate Ptosis

- 3 mm droop
- 5-7 mm of levator excursion
- levator function considered fair

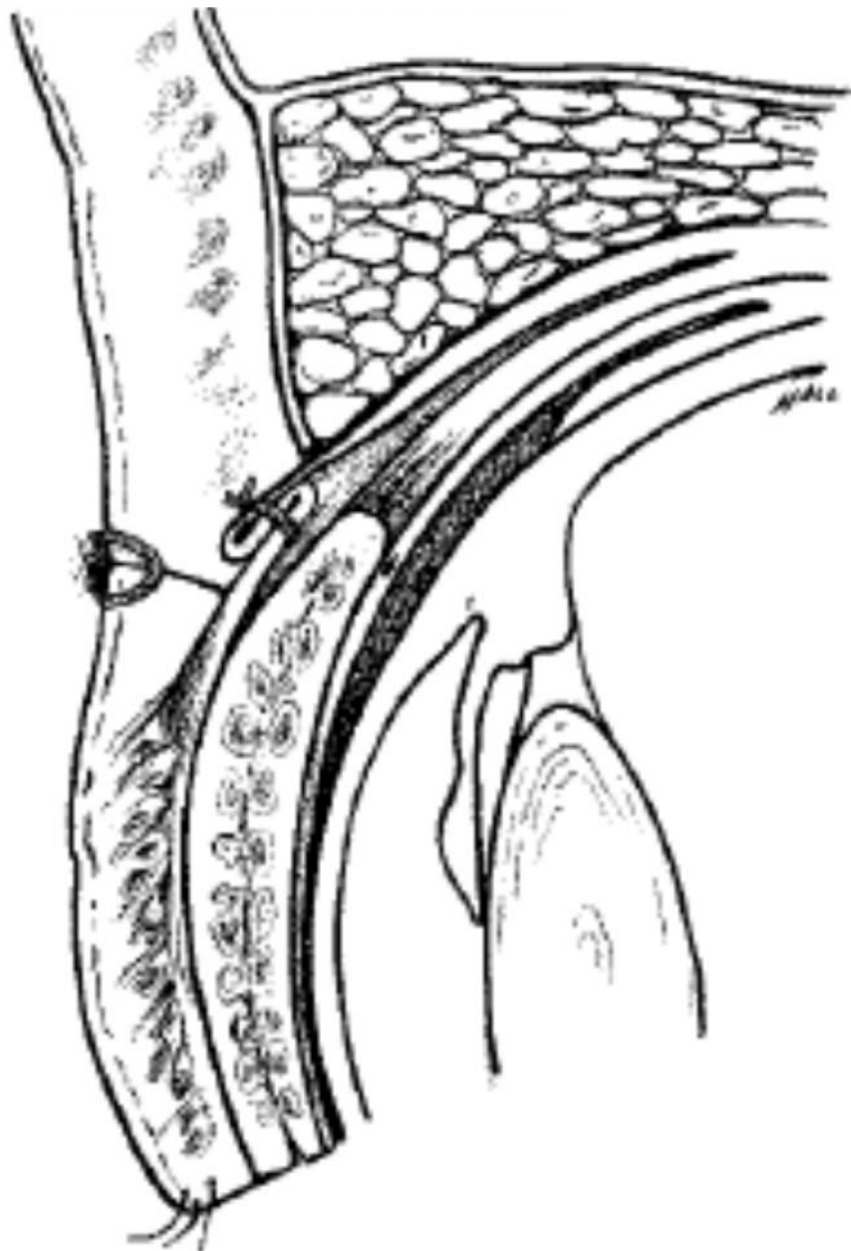
Severe Ptosis

- 4 mm droop
 - 4 mm or less of levator excursion
 - levator function considered poor
-



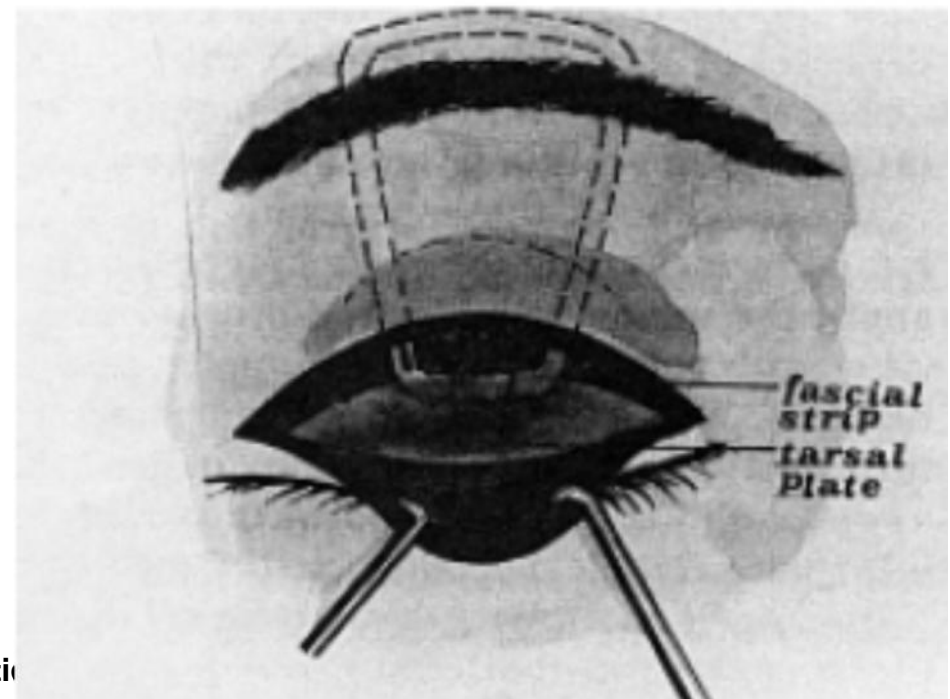
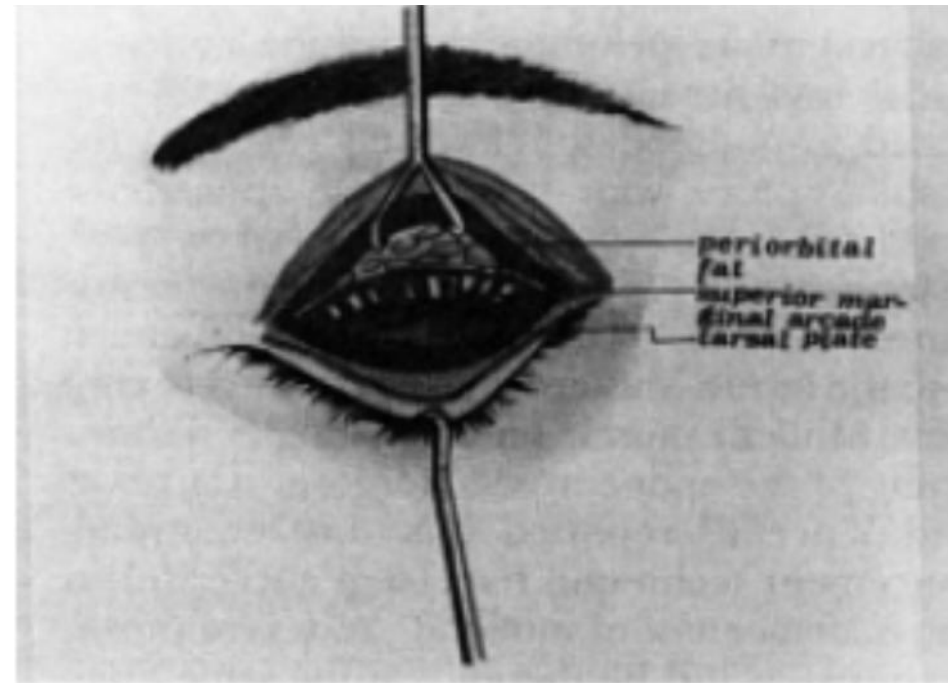
Levator anchoring technique



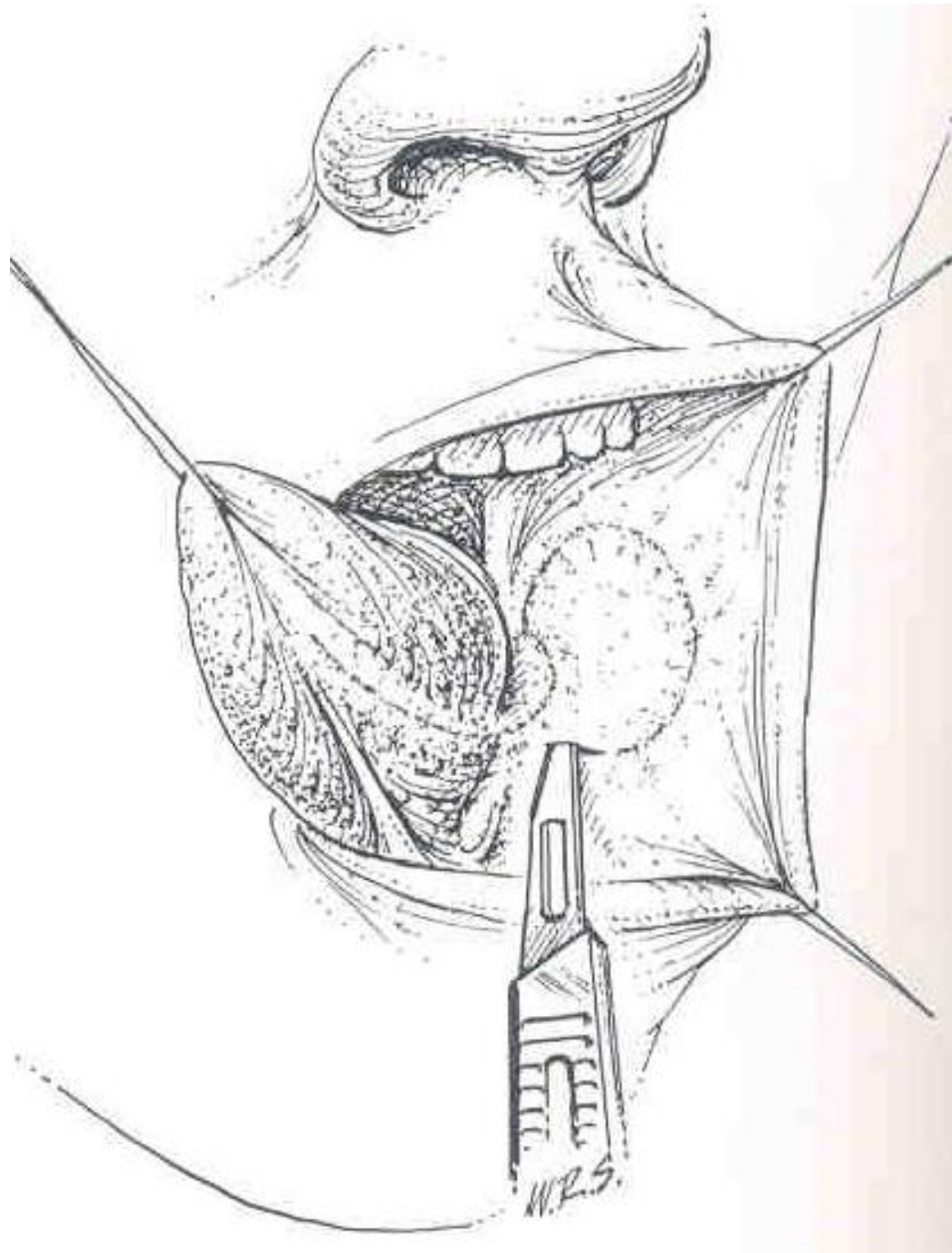


Simple plication of aponeurosis

Frontalis fascial sling for upper lid ptosis

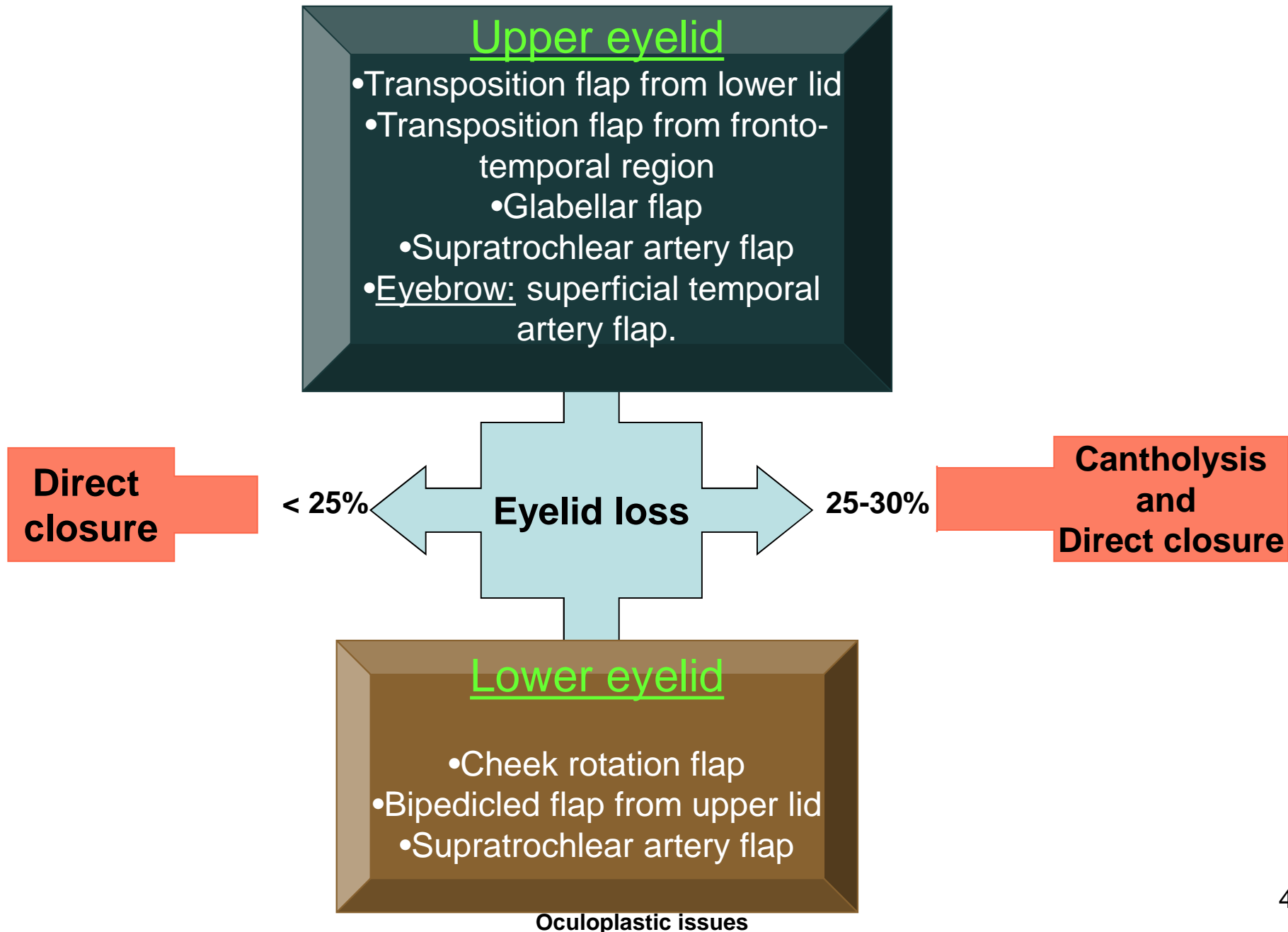


MANAGEMENT OF EYELID DEFECTS

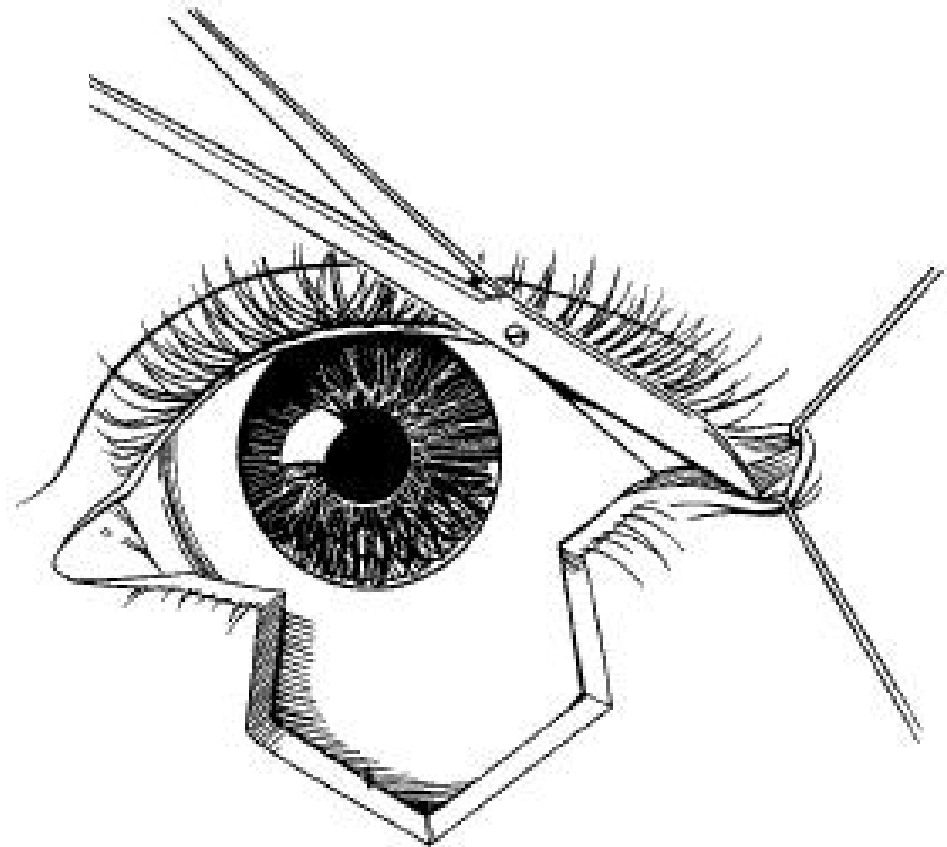
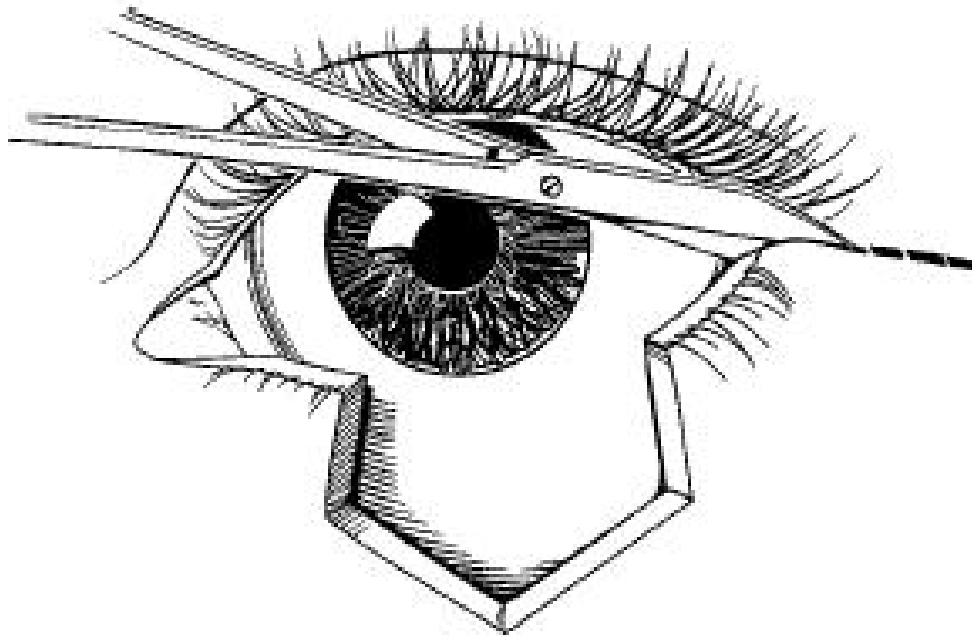


Harvesting buccal mucosal graft

Management of eyelid defects:



Technique of relaxing incision of the lateral canthus and lysis

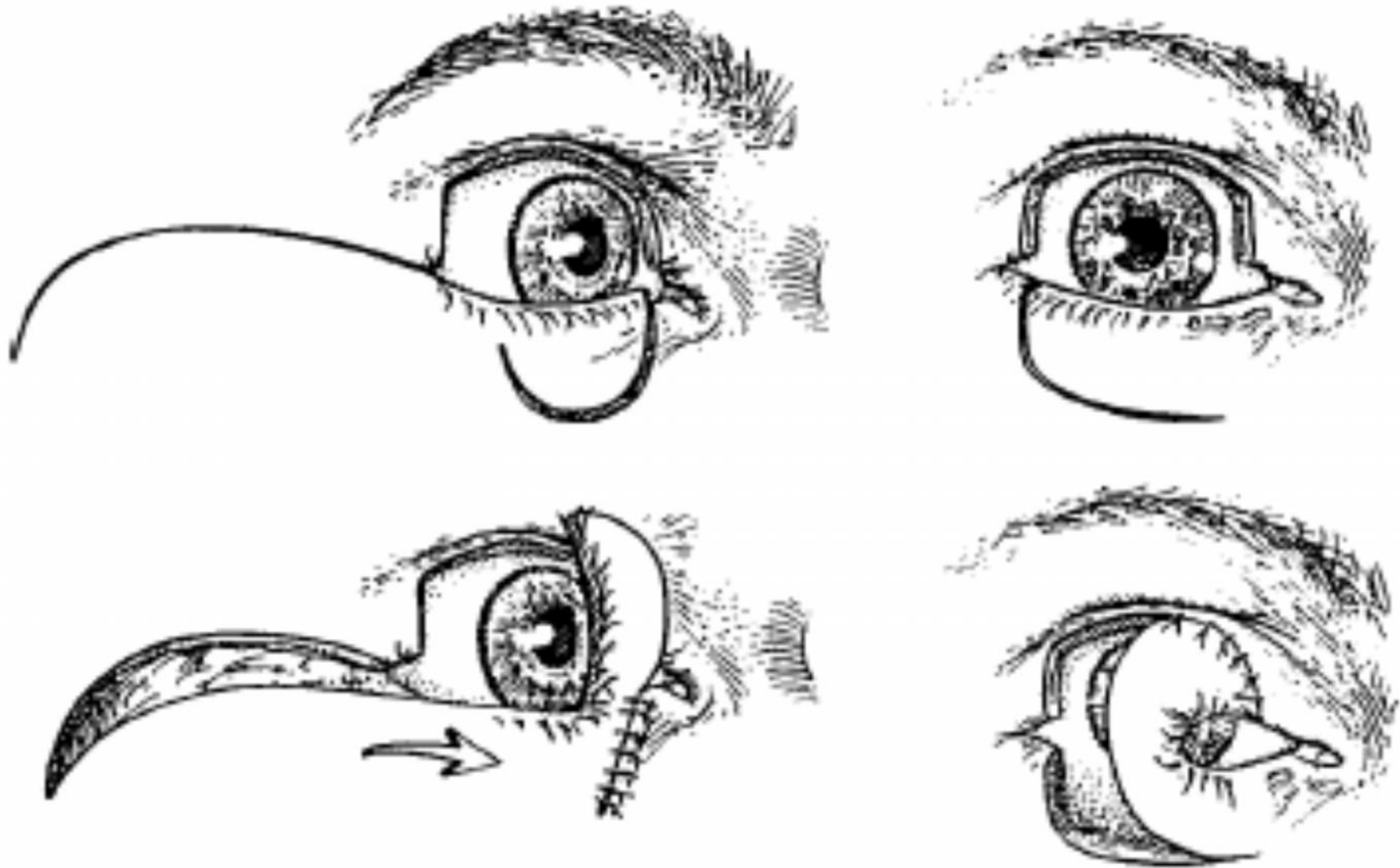


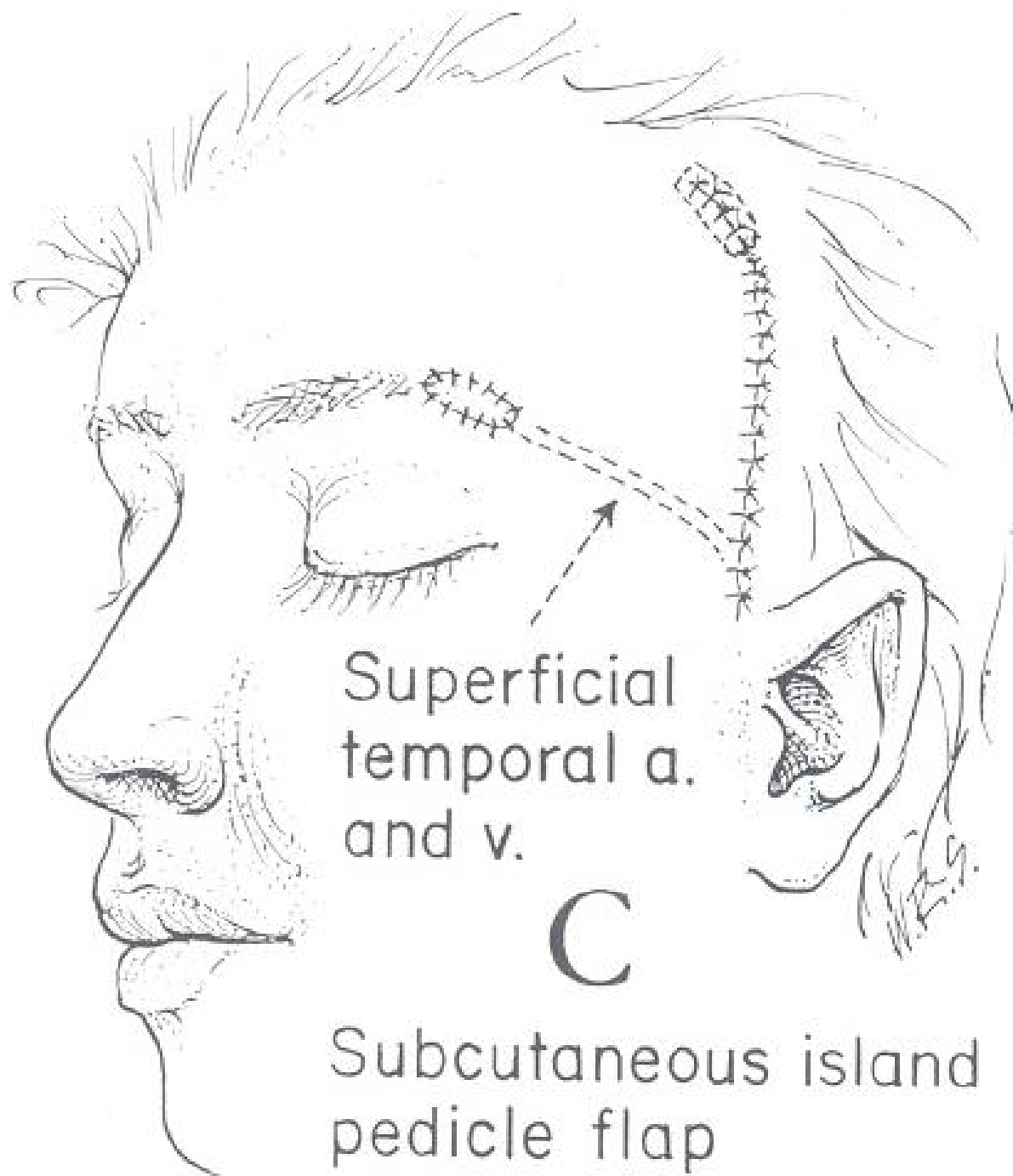
Cheek rotation flap (post operatively)



Oculoplastic

Left, Laterally based flap. Right, Medially based flap.

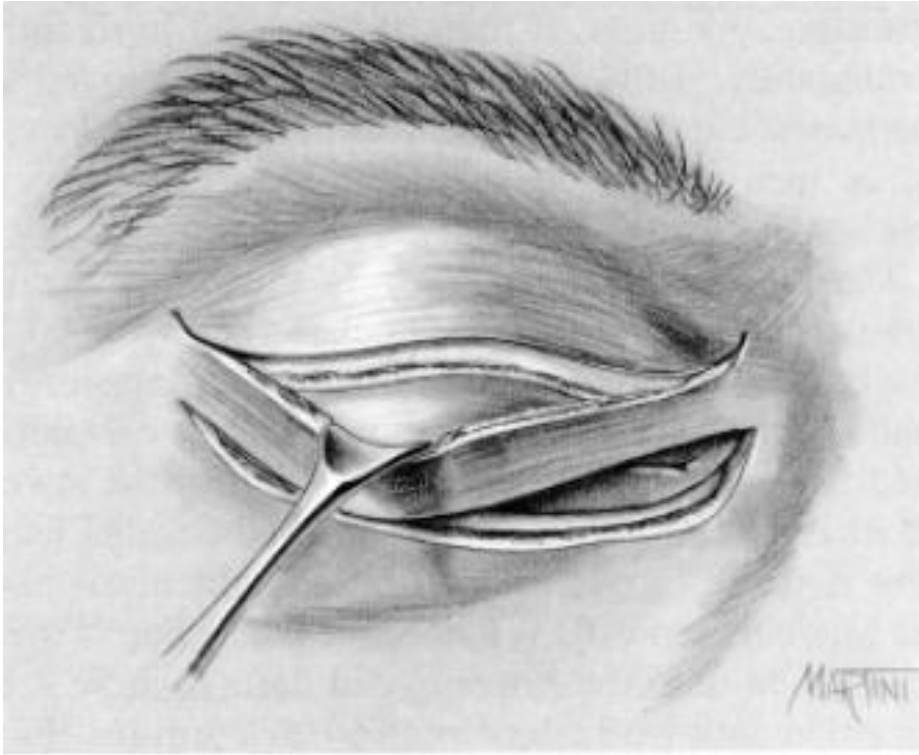




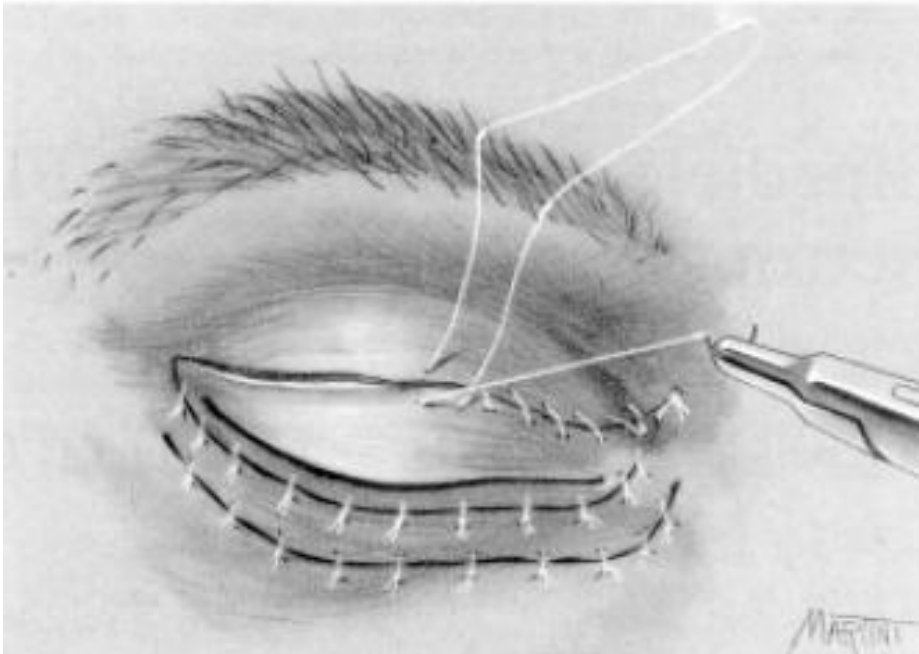
Superficial
temporal a.
and v.

C

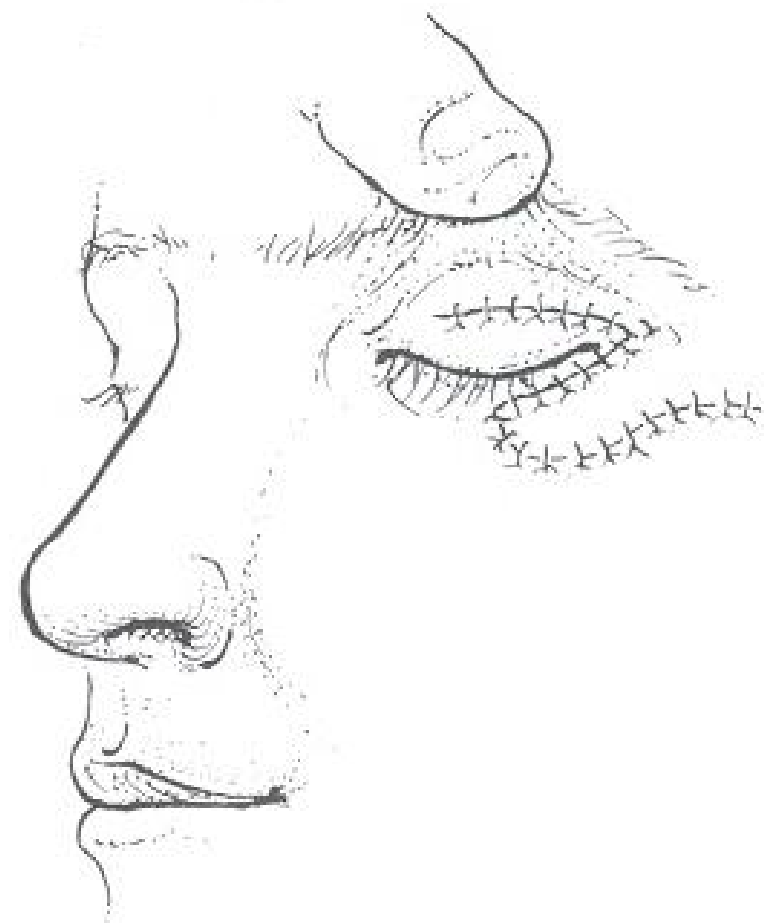
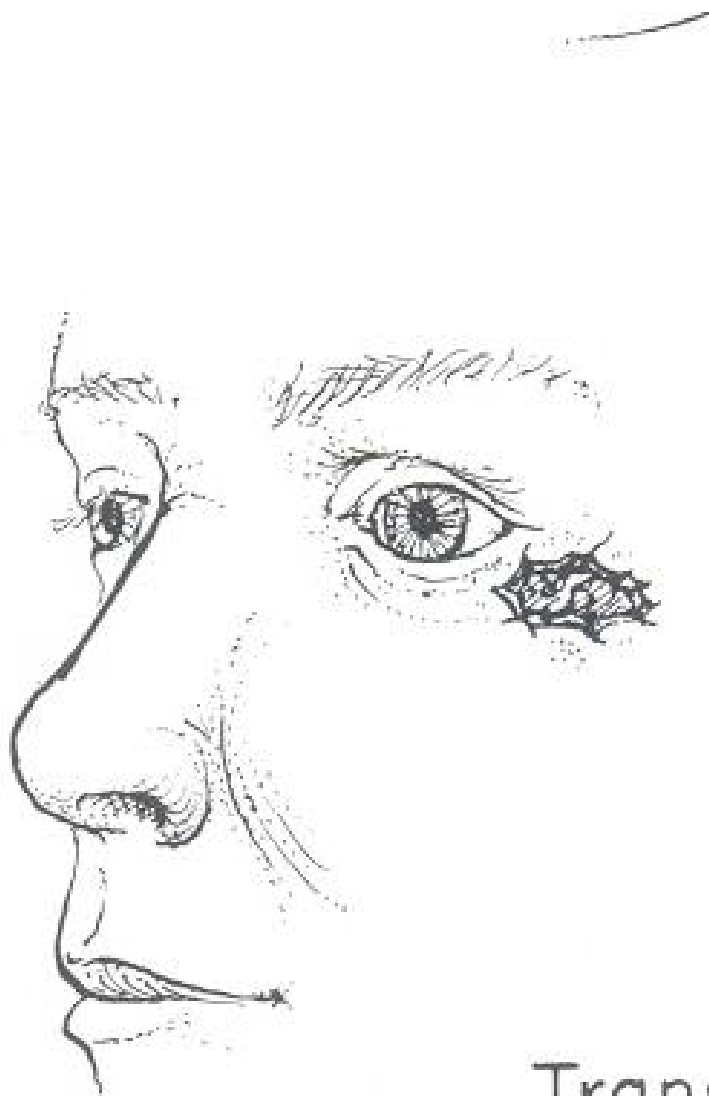
Subcutaneous island
pedicle flap



Lower eyelid reconstruction with a modified bipedicle musculo-cutaneous flap from the upper lid.



lastic issues



B

Transposition flap



Supratrochlear artery
flap for lower lid
reconstruction



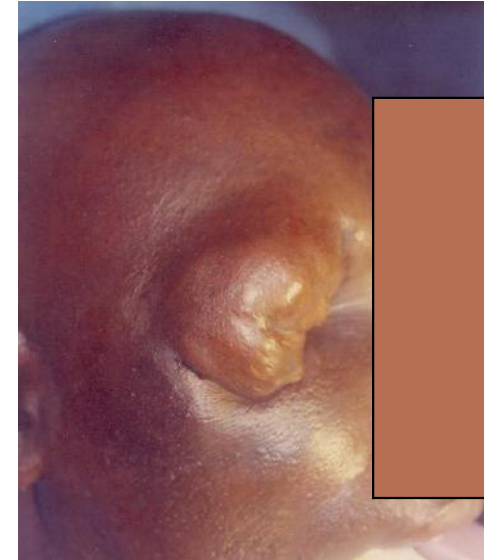


Oculop

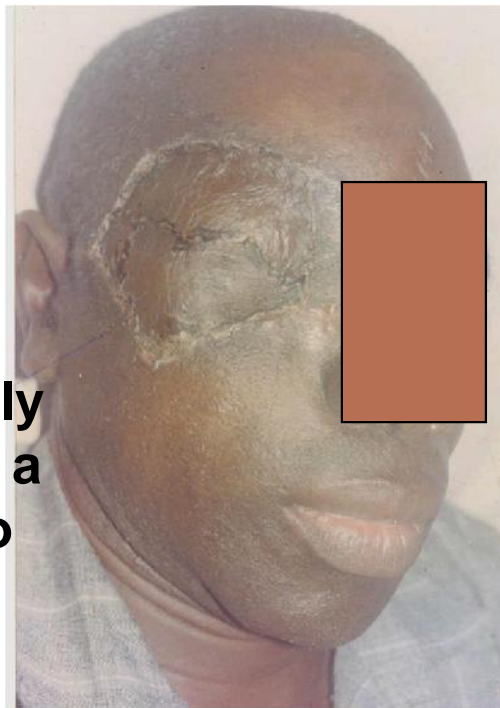
Ibadan's combination of temporalis muscle and glabellar flap to fill up the orbit after orbital exenteration



Preoperative

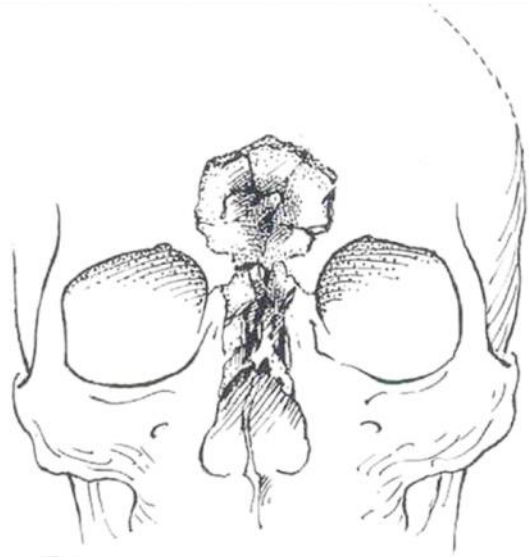
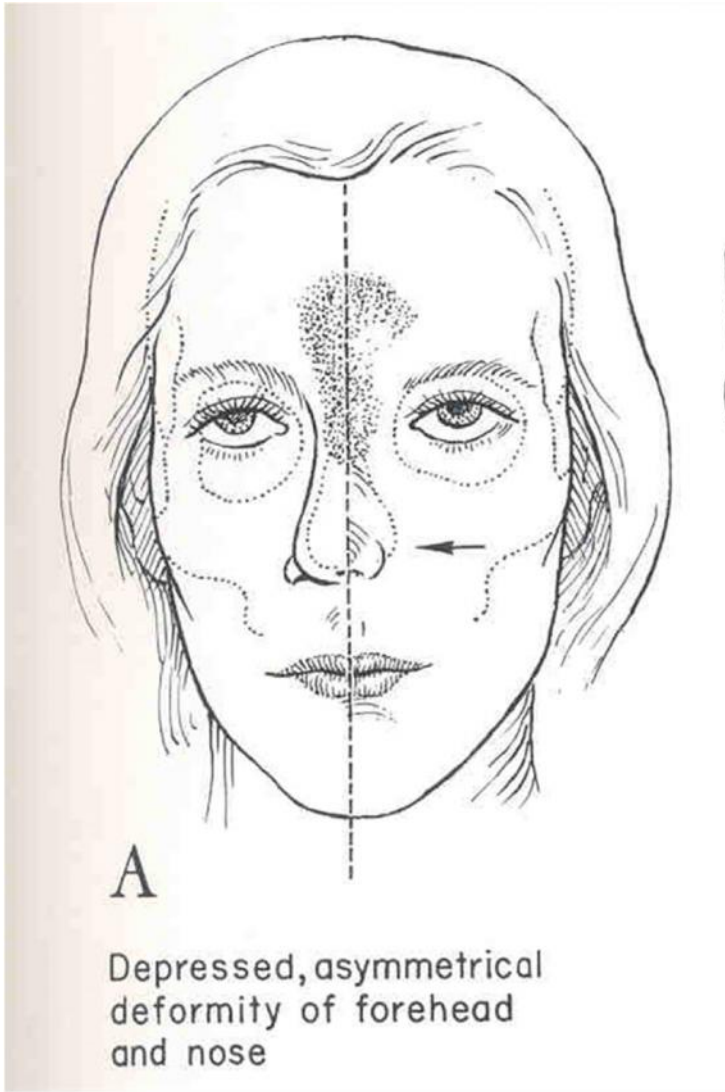


**Postoperatively
prior to fitting a
prosthesis to
mask the
default**

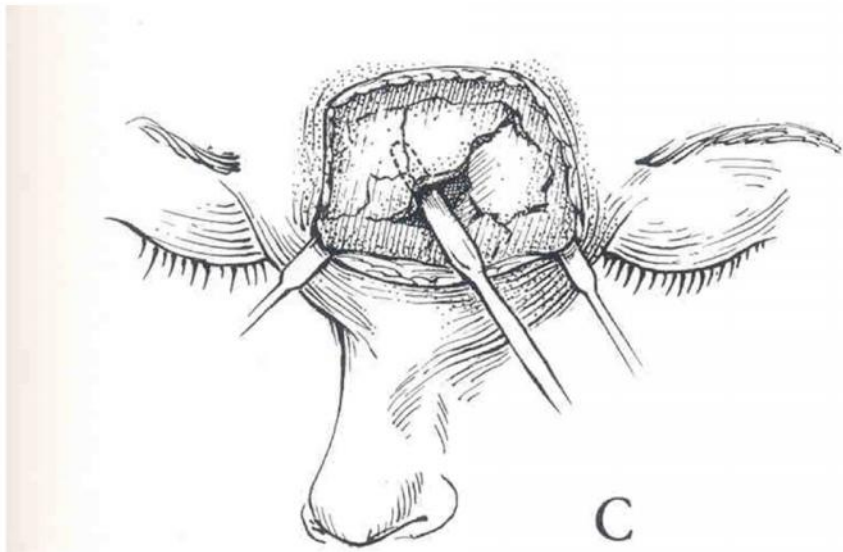


FIXATION OF ORBITAL AND PERI-ORBITAL FRACTURES

Periorbital fracture

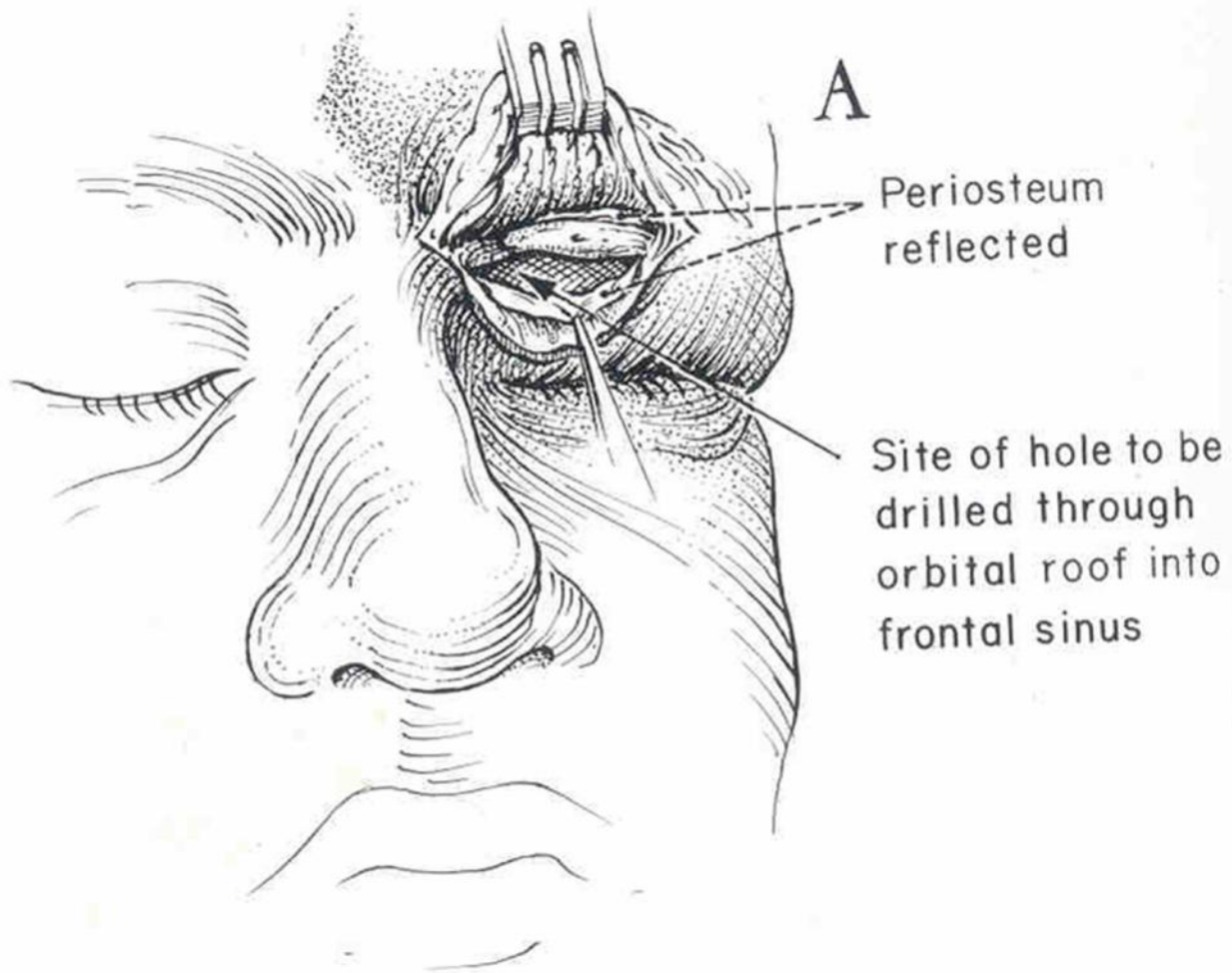


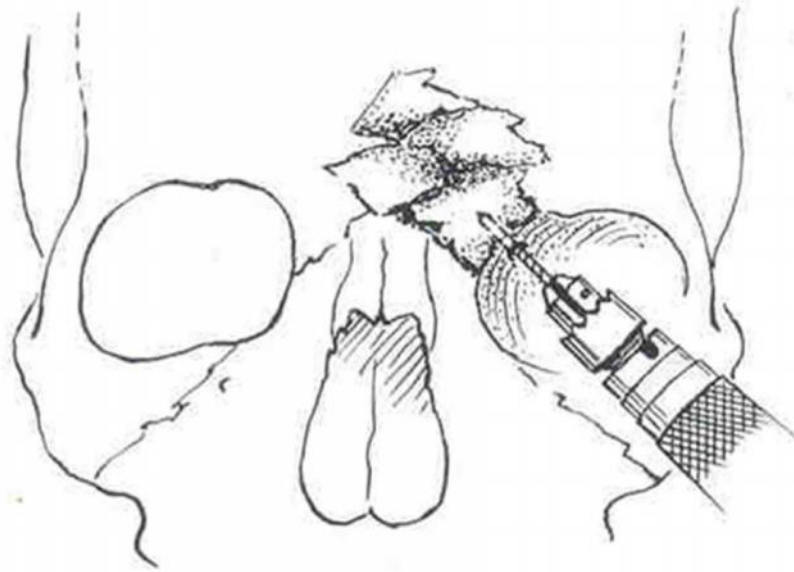
Fractures of frontal sinuses and nasal bones



Depressed segments elevated after removing center fragment

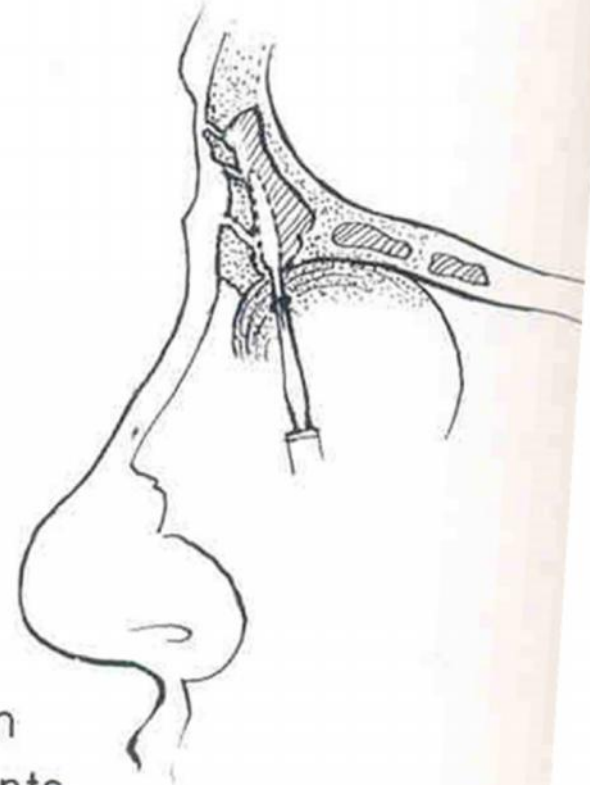
Ocu





B

Power drill used to enter frontal sinus

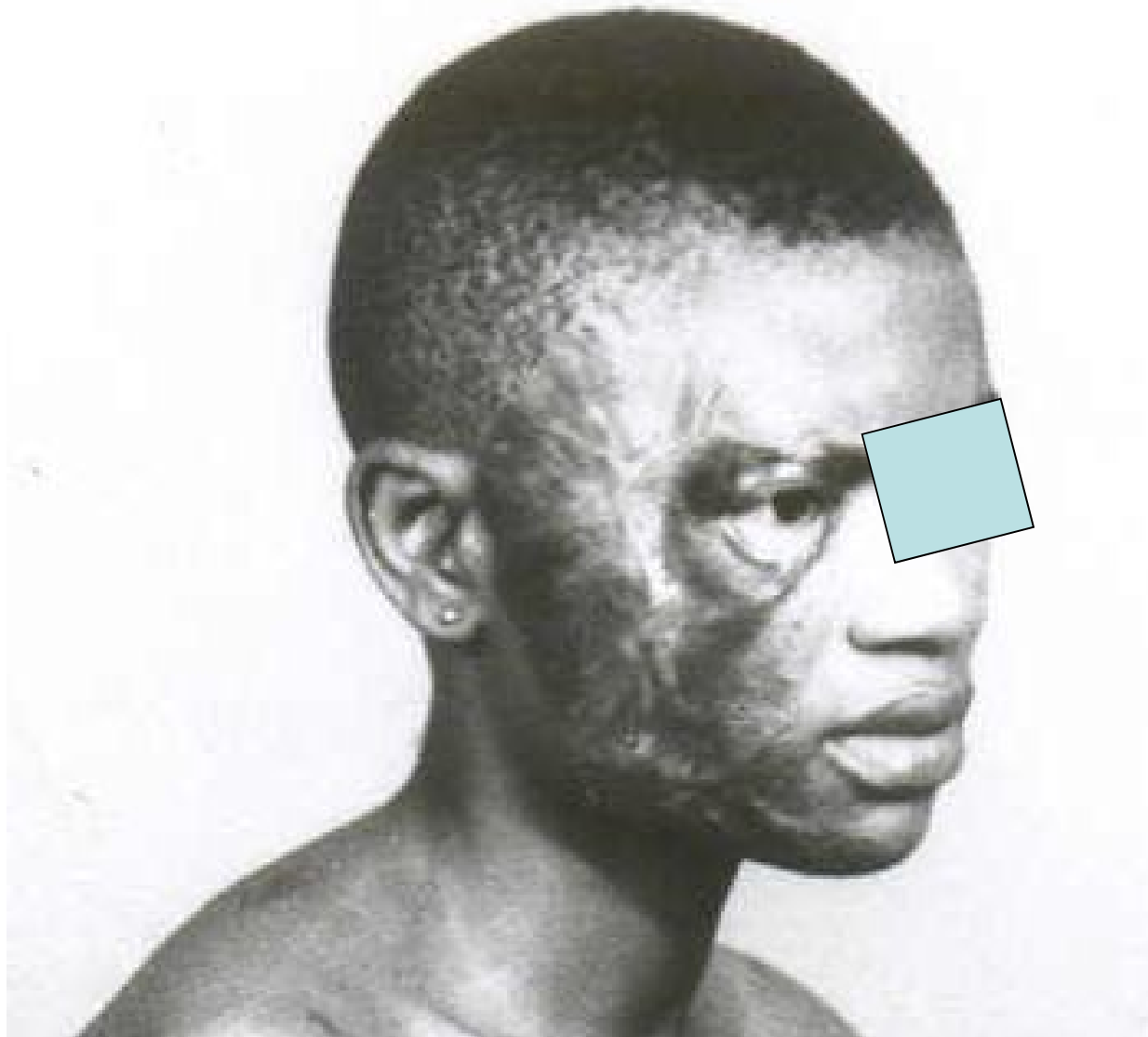


C

Joseph elevator used to elevate and position bone fragments. Covering periosteum kept intact to maintain fragments in position

SOME SEQUELAE OF INAPPROPRIATE TREATMENT

Ectropion of lower eyelid



Repair of left upper lid ectropion with full thickness skin graft

