



Blepharoptosis

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Basir eye center
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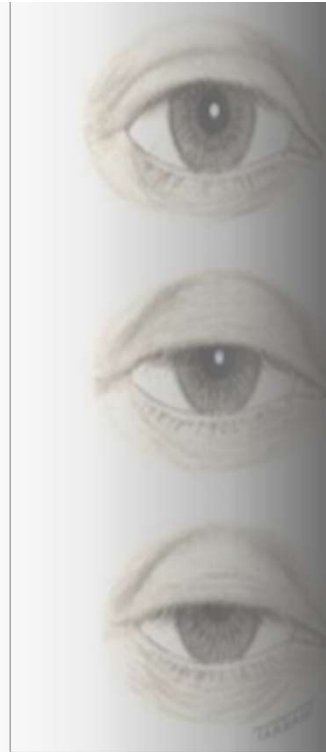
Outline

- Definition and examinations
- Pseudoptosis
- Classification (aponeurotic, myogenic, mechanical, traumatic)
- Management

Ptosis= falling

Blepharoptosis= upper lid drooping

Inverse ptosis= upward lower lid



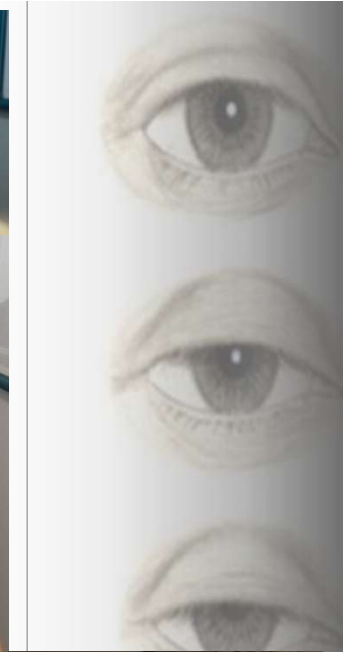
History taking/what to ask patient?

- Onset (new, old), ask for some photos
- Fluctuation of ptosis
- Severity (interfering with daily activities like reading)
- Accompanied symptoms (pain, diplopia, muscle weakness, dysphagia)
- Hx of trauma, recent ocular sx or BTA injection
- Family history of ptosis or muscular diseases



What to inspect?

- Head posture (chin up)
- Forehead crease
- Brow position
- Periocular and facial spasms
- Synkinetic movements
- Facial asymmetry
- Superior sulcus (deep, bulge), eyelid swelling
- Globe position (misalignment)
- Pupil size



Examinations

- MRD1: in mm
- MRD2: in mm
- Palpebral fissure (PF): in mm
- Levator function (LV): in mm
- Lid crease height: in mm in downgaze(8-9 in males , 9-11 in females)
- Lagophthalmos: present or absent
- Dry eye severity
- Bell's phenomenon: 0 = no movement, 1 = minimal movement (the pupil still visible), 2 = full movement (the pupil is covered by the eyelid)





Margin reflex distance 1 (MRD1): the distance between the upper eyelid margin and the pupillary reflex in primary gaze. This test is used to grade the degree of ptosis. Normal MRD1 is around 4 to 4.5 mm.



MRD1	Amount of Ptosis	Severity of Ptosis
2-3mm	1-2mm	Mild
1-2mm	2-3mm	Moderate
± 1	± 4	Severe

Position of Upper Eyelid	Amount of Ptosis
On the Superior Border of Pupil	Mild
Covering Half the Pupil	Moderate
Completely Covering the Pupil	Severe

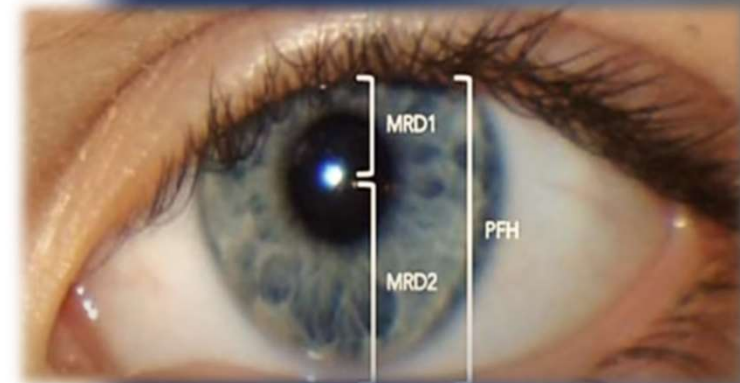




Margin reflex distance 2 (MRD2): the distance between the pupillary reflex in the center to the lower eyelid margin. It is a measure of lower lid retraction. A measurement of **5 to 5.5 mm** is considered normal.



Palpebral aperture: the distance between the upper eyelid and lower eyelid at the center (widest point) in primary gaze. Normal distance ranges from 7 to 10 mm in males and 8 to 12 mm in females.



levator function: Place the thumb against the brow to stop the action of the frontalis and then ask the patient to move the eyes from extreme downgaze to upgaze.

Levator function is graded as

Normal: >15mm

Good: 12 to 14 mm

Fair: 5 to 11 mm

Poor: 4mm or less





Margin crease distance (MCD) or lid crease height: the distance from the upper eyelid crease to the upper eyelid margin in downward gaze. Normal MCD is 8 to 9 mm in males and 9 to 11 in females. The lid crease is absent or shallow in patients with congenital ptosis.

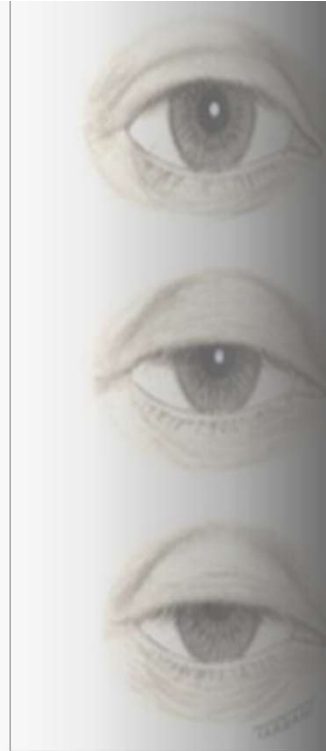


Bell's phenomenon: 0 = no movement, 1 = minimal movement (the pupil still visible), 2 = full movement (the pupil is covered by the eyelid)



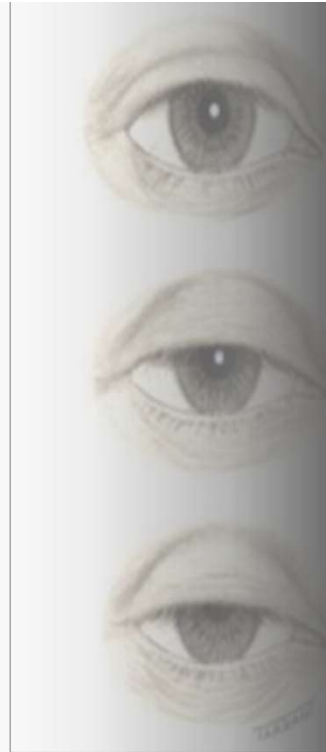
Other remarkable examinations:

- Refraction, BCVA and evaluation of amblyopia (deprivational, anisometropic, isoametropic)
- EOM movement restrictions and deviations
- Exophthalmometry
- Fundoscopy (pigmentary retinopathy in CPEO)
- Check for hidden ptosis of contralateral eye (**consider Hering's law of equal innervation**)



phenylephrine test

- In patients with **good** levator function, a phenylephrine test can be employed
- If ptosis **exceeds 4 mm**, this test is not an accurate predictor of surgical success
- Two drops of **2.5%** phenylephrine are instilled into the **upper fornix** of the **ptotic eye**.
- The maximum height of the eyelid takes approximately **3–5 min**.





Pseudoptosis

Pseudoptosis is an apparent blepharoptosis **without** true decreased MRD or a ptosis secondary to underlying **globe malposition**.

Pseudoptosis -> Dermatochalasis

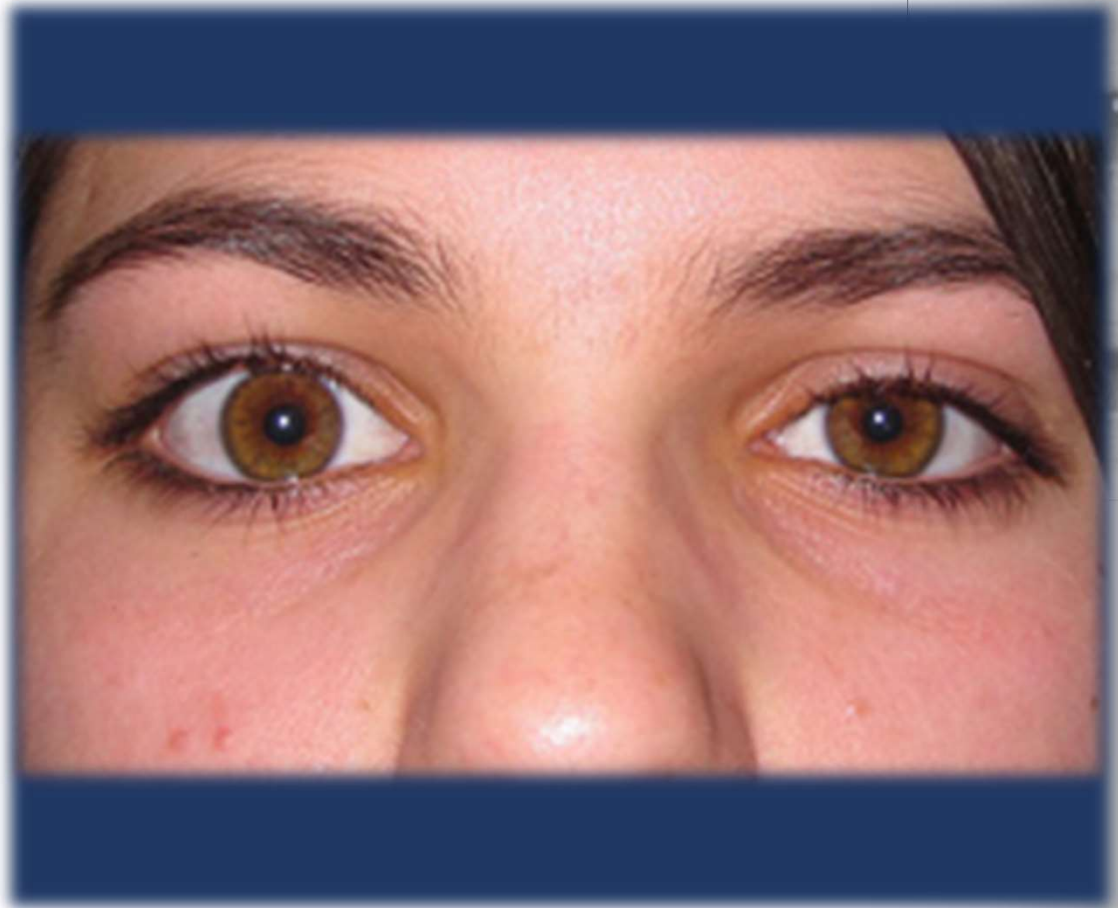
The eyelid skin should be gently lifted off the pretarsal eyelid to reveal the eyelid margin and to allow correct measurement of the MRD.





Pseudoptosis -> Contralateral Lid Retraction

By far the leading etiology of unilateral eyelid retraction is TED, which is found in up to 90% of patients with thyroid dysfunction at some point during their clinical course.

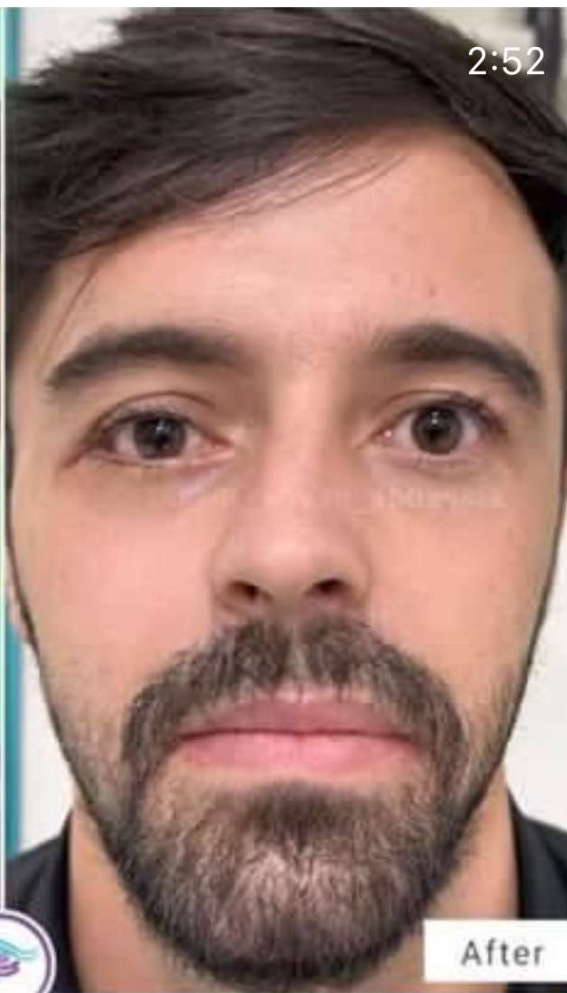


Pseudoptosis -> Enophthalmos

initial misdiagnosis of enophthalmos as ptosis is not uncommon as most cases are associated with some degree of ptosis secondary to **abnormal globe position** and a **deep superior sulcus**.



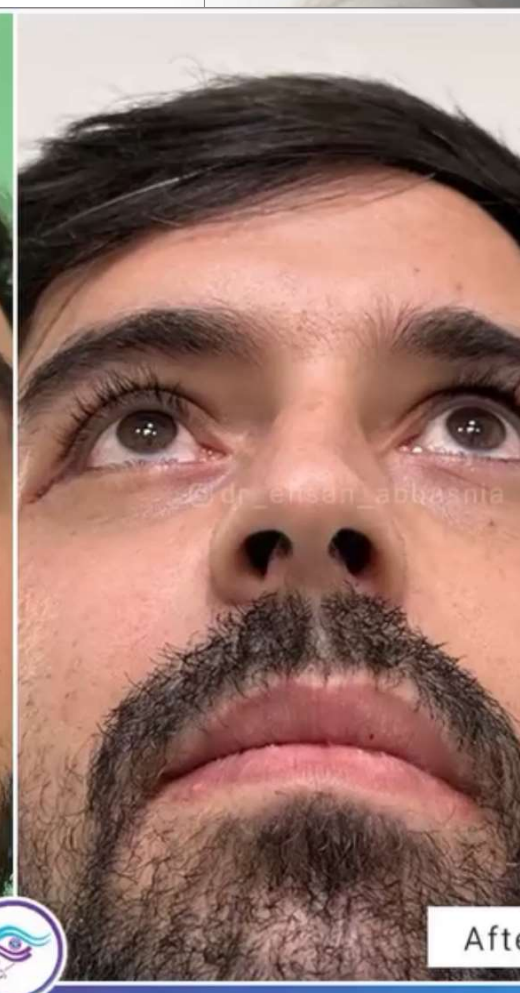
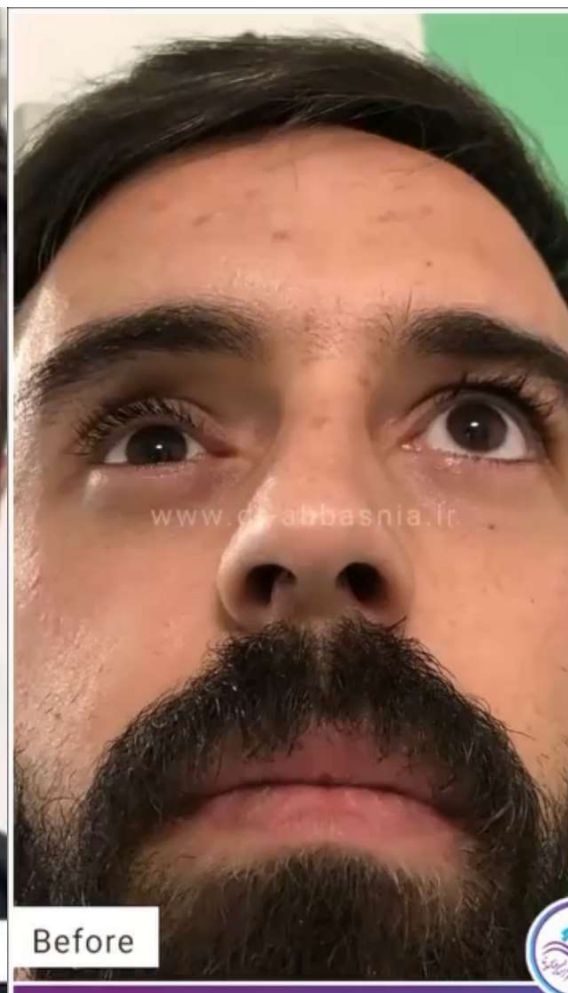
Fig. 23.5 Ptosis secondary to posttraumatic enophthalmos. The left upper lid is ptotic secondary to enophthalmos (*left*) from a large old orbital floor fracture seen on CT (*right*). Note that left hypoglobus is also present.



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After

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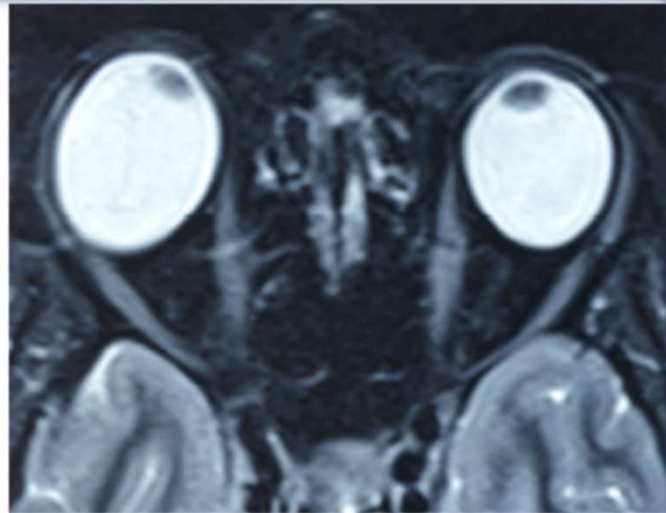
Before

After

«ترمیم تورفتگی گونه و شکستگی کف حلقه»

Pseudoptosis -> Globe asymmetry

- Unilateral myopia
- microphthalmia
- Phthisis bulbi



Pseudoptosis -> Ocular misalignment

Vertical strabismus may have a component of pseudoptosis

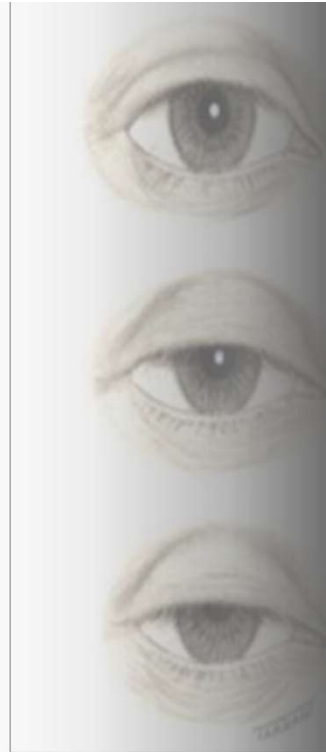
Hypotropia

Hypertropia

Hyperglobus

Hypoglobus

Palpation of the superior orbit and examination of the superior cul-de-sac are essential in all patients presenting with ptosis.



Hypotropia



hypertropia

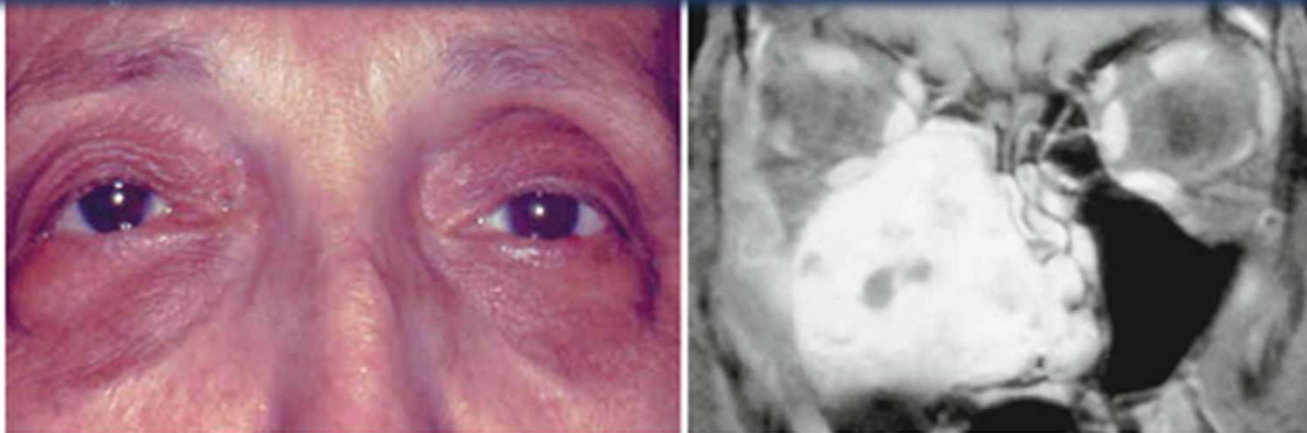


Fig. 23.8 Eyelid asymmetry secondary to hyperglobus. *Left*, clinical view of a patient seeking an opinion regarding her lids after being told by members of her bridge club that her "eyes and lids look funny." Ptosis is present bilaterally. The asymmetric dermatochalasis on the right is

secondary to hyperglobus. *Right*, coronal MRI (T-1, postcontrast with fat suppression) shows a mass filling the right maxillary sinus and nasal cavity with secondary extension into the orbit. Extirpation of the sinus pleomorphic adenoma was curative and the globe malposition resolved.



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Psychogenic Unilateral Pseudoptosis

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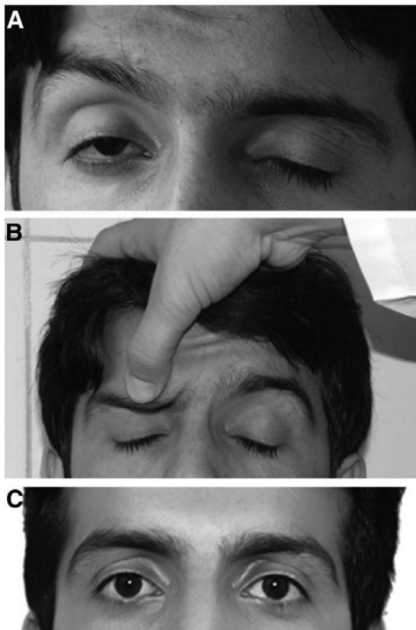


FIG 2. **A.** Prominent skin folds of the left eyelids are due to orbicularis muscle spasm. **B.** Higher position of left lower eyelid (reverse ptosis) that is more prominent in upper gaze. **C.** Reverse Bell's phenomenon. In this patient, the OS has moved downwardly and inwardly. **D.** Normal eyelid fissures following intravenous placebo injection.

Pseudoptosis -> Spastic disorders

True eyelid position is often difficult to ascertain in BEB patients because of the **variable degree** of blepharospasm at any given moment, as well as the effect of any ongoing treatment (e.g., **botulinum toxin** injection).

- Ptosis in BEB may be secondary to orbicularis contraction (**pseudoptosis**) **early** in the course of the disease.
- However, **over time**, **true levator dehiscence** or attenuation occurs; this is due at least in part by patients' understandable habit of frequently trying to digitally force the eyelids open against the spasm.



Fig. 23.10 Benign essential blepharospasm. Note the bilateral forced closure of the eyelids secondary to uncontrolled spasm of the orbicularis oculi muscles.



dr ehsan abbasnia
Ophthalmologist

1/2



اصلاح انقباض عضلات و تو رفتگی پلک

Pseudoptosis -> DRS

Restricted movement in lateral gaze, globe retraction and narrowing of palpebral fissure. Seems like variable ptosis in lateral gazes



Fig. 23.13 Duane retraction syndrome. A patient with Type III DRS. Note the bilateral limitation of horizontal gaze with globe retraction and narrowing of the palpebral fissure on attempted adduction of each eye

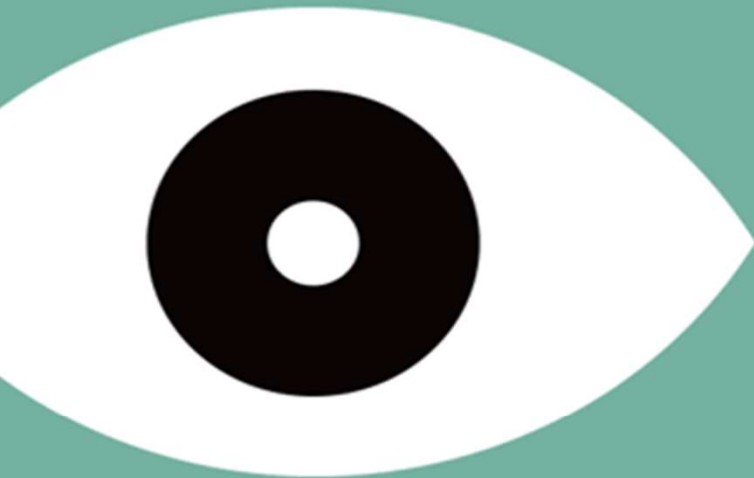


Pseudoptosis -> Floppy eyelid syndrome

FES is associated with a variety of disorders including obstructive, sleep apnea (OSA), **blepharoptosis**, **eyelash ptosis**, keratoconus and **dermatochalasis**



Classification



Congenital/ Acquired

Aponeurotic

- ❖ Involutional
- ❖ At younger age secondary to trauma, eye rubbing, RGP

Myogenic

- Congenital (LPS dysgenesis, CFEOM)
- Acquired (MG, CPEO, myotonic dystrophies)

Neurogenic

- Congenital (3rd N palsy, Marcus Gunn jaw- winking, Horner)
- Acquired (3rd N palsy, Marcus Gunn jaw- winking, Horner)

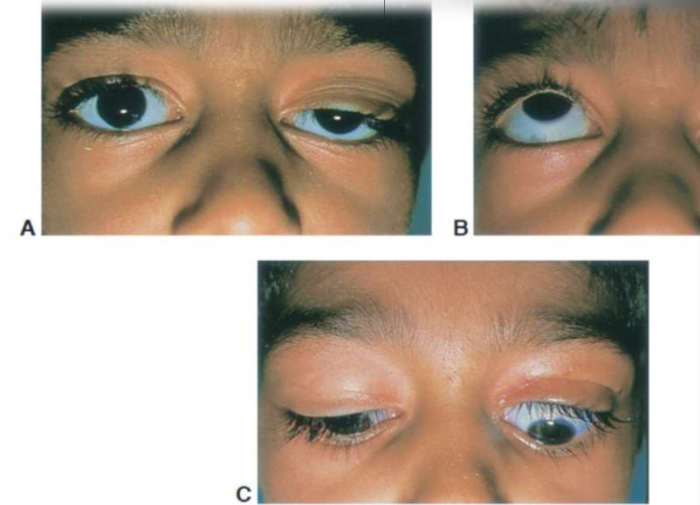
Mechanical

Traumatic

Congenital myogenic ptosis

- ❑ Decrease in muscle size and number of fibers of levator,
- ❑ fibrous or adipose tissue in the muscle belly.
- ❑ Inability to contract sufficiently to elevate the eyelid in primary gaze and to relax inadequately, resulting in eyelid lag on downgaze.
- ❑ Poorly formed or absent upper lid crease

20% with accompanied amblyopia



- ❑ If amblyopia or refractive error is diagnosed, it should be treated with appropriate occlusion therapy and spectacles.
- ❑ Amblyopia may develop **postoperatively** even if it is absent preoperatively. Refractive error changes may occur after surgery specially in astigmatism.



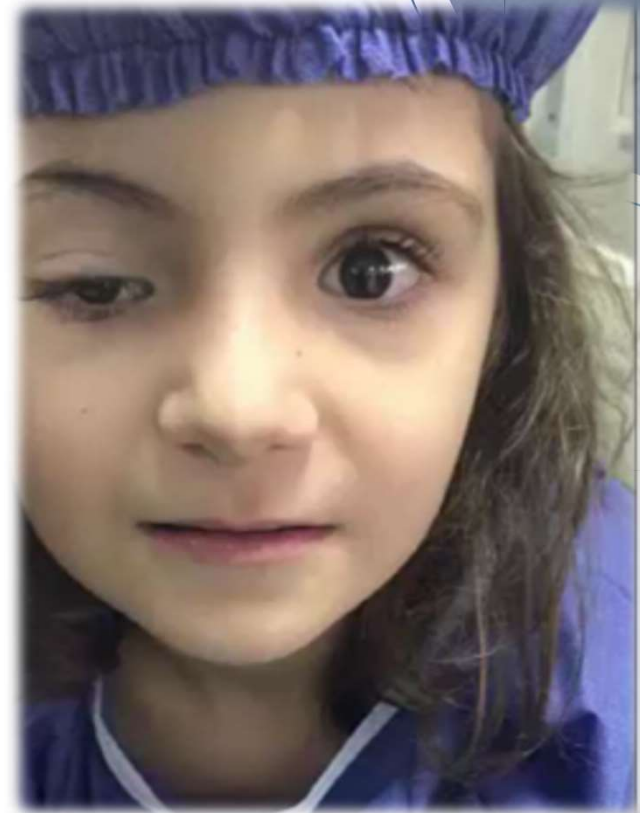
- **Concurrent MED** in 5% of congenital ptosis cases. (The levator and the superior rectus muscles arise from the **same mesodermal bud**.)
- Masking the condition with a compensatory **chin elevation**.
- Hypotropia needs to be corrected **before** the ptosis can be addressed.



Congenital fibrosis of extra-ocular muscles

A rare congenital, **nonprogressive**, restrictive global ophthalmoplegia and congenital ptosis.

Fibrotic myopathy secondary to congenital cranial dysinnervation disorders (**CCDDs**)



Acquired myogenic ptosis

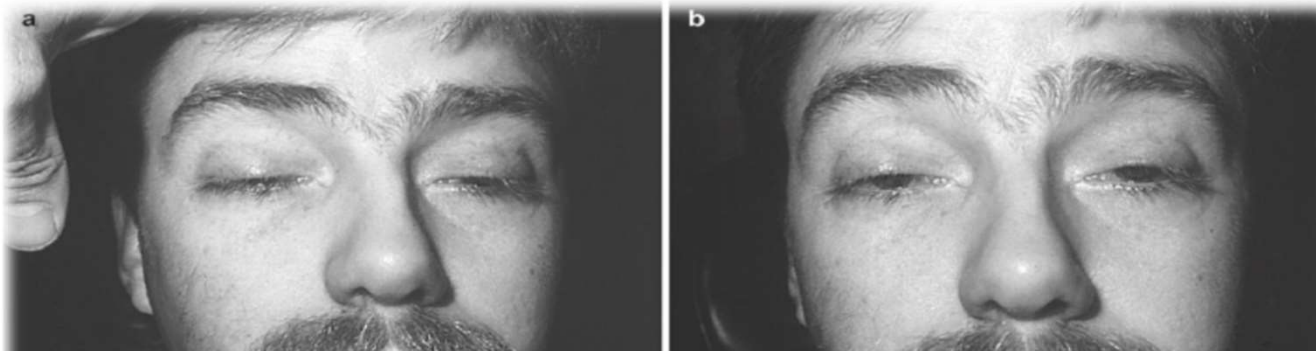
Overlap with ptosis of neurogenic etiology.

- MG
- CPEO
- Myotonic dystrophy
- Oculopharyngeal muscular dystrophy



CPEO

- Mitochondrial myopathy
 - Onset in adolescence
 - Very slowly progression over years
 - Orbicularis is also involved (lagophthalmos)
- ✓ In early stage it can present as ptosis with poor LF, without external ophthalmoplegia
- ✓ Symmetric external ophthalmoplegia leads to **no complain of diplopia**.



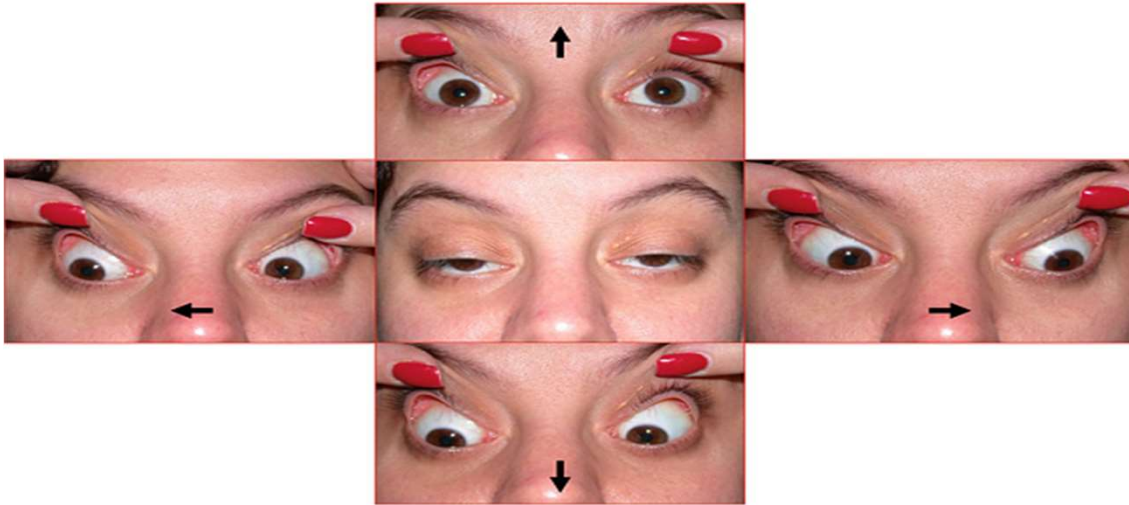


Fig. 23.18 Chronic progressive external ophthalmoplegia: Ophthalmoplegia plus syndrome. A 31 year-old woman presented with progressive ptosis over the past 5 years. Pigmentary retinopathy had been noted several years prior. She denied diplopia or any history of cardiac dis-

ease. External, severe ptosis with absent levator function is noted, along with obvious external ophthalmoplegia. As a precaution, she was referred to a cardiologist for long-term follow-up (arrows indicate attempted direction of gaze)

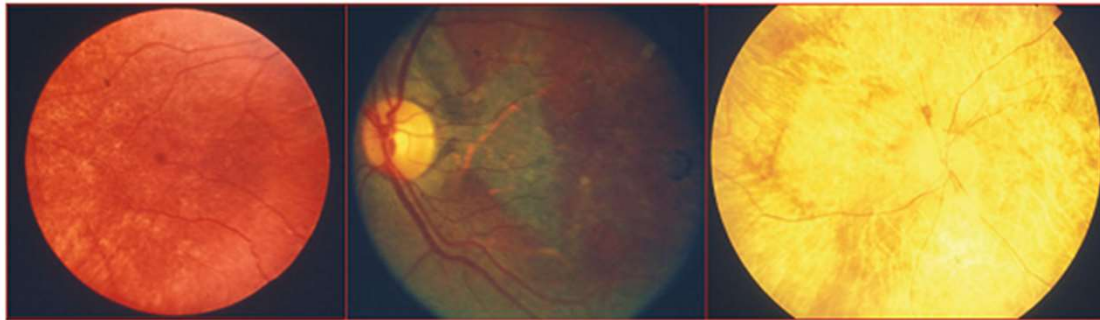


Fig. 23.19 Retinopathy in Kearns Sayre syndrome. Note that the abnormalities mainly affect the posterior fundus. *Left*, early dropout of the retinal pigment epithelium (RPE) with no secondary pigmentation.

Center, placoid atrophy. *Right*, diffuse RPE dropout and chorioretinal atrophy. Note the absence of the typical bone spicules characteristic of retinitis pigmentosa

- ✓ retinal pigment epithelium
- ✓ photoreceptors
- ✓ heart

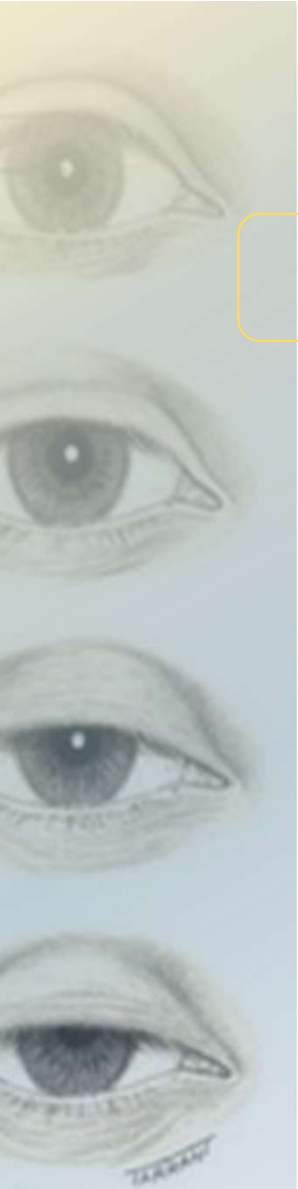
Myotonic dystrophy

- AD multisystem disease
- Involuntary muscle contraction and delayed relaxation (myotonia)
- Muscle wasting (muscular dystrophy)
- Bifacial weakness and mask face, Ptosis ,orbicularis weakness and poor blinking
- **“Hatchet facies”** due to temporalis muscle wasting
- Ophthalmoplegia
- Frontal alopecia
- Decreased visual acuity (chromatic cataract, Maculopathy, Peripheral pigmentary retinopathy)



Aponeurotic ptosis

- Most common form of acquired ptosis
- localized or generalized disinsertion or dehiscence of the aponeurosis from sup edge of tarsus.
- By aging levator fibers may be replaced with bundles of adipose tissue, leading to fatty infiltration of the levator.
- High lid crease
- Good levator function(15 mm)
- May worsen in downgaze, thus interfering with the patient's ability to read, as well as limiting the superior visual field.



Aponeurotic ptosis

In Younger patients:

- ❑ Previous trauma
- ❑ Postsurgical changes,
- ❑ Contact lens wear
- ❑ Long-standing Graves'-related lid retraction that has eventually led to levator dehiscence



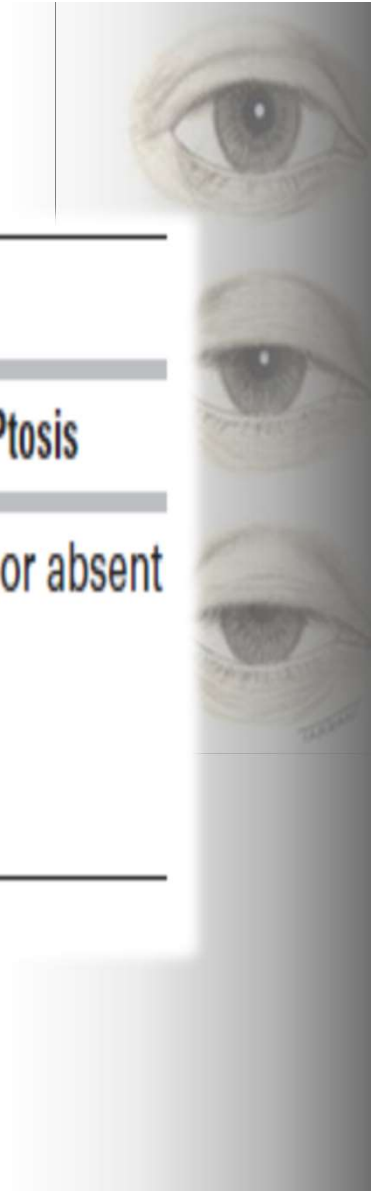


Table 12-1 Blepharoptosis Comparison

	Congenital Myogenic Ptosis	Acquired Aponeurotic Ptosis
Upper eyelid crease	Poorly formed	Higher than normal or absent
Levator function	Reduced	Near normal
Downgaze	Lid lag	Eyelid drop



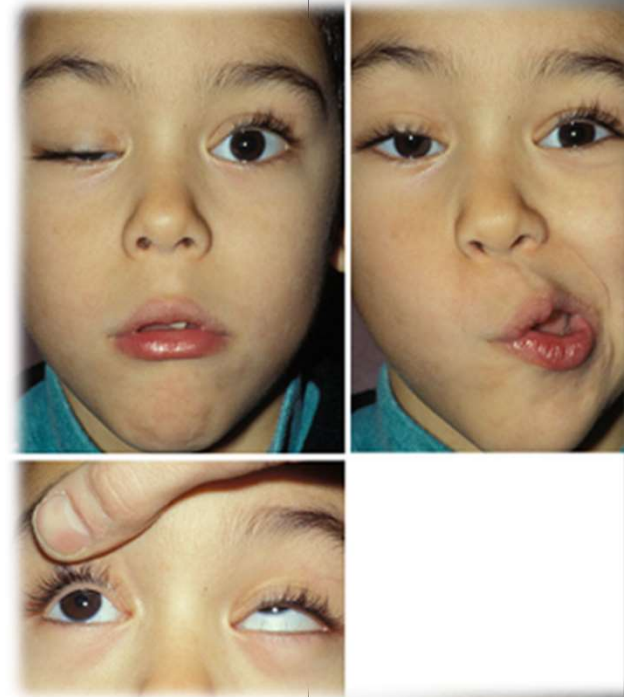
Congenital neurogenic ptosis

- ☐ **Congenital 3rd N palsy:** ptosis + inability to elevate, depress, or adduct the globe.
- ☐ Partial or complete
- ☐ Ptosis is very rarely an isolated finding

It is **uncommon** to find aberrant innervation in congenital CN III palsies.

Marcus Gunn jaw- winking syndrome

Aberrant connection between **motor** branches of the **trigeminal nerve** and the superior division of the **oculomotor** nerve



Congenital horner syndrome

- Unilateral **mild** Ptosis (rarely bilateral)
- Lower lid ptosis “**reverse ptosis**” of lower lid is extremely helpful.
- Ipsilateral miosis (anisocoria worse in darkness)
- Anhydrosis, transient conjunctival injection, are less commonly encountered.
- “**Dilation lag**” typical feature of HS.
- Iris heterochromia



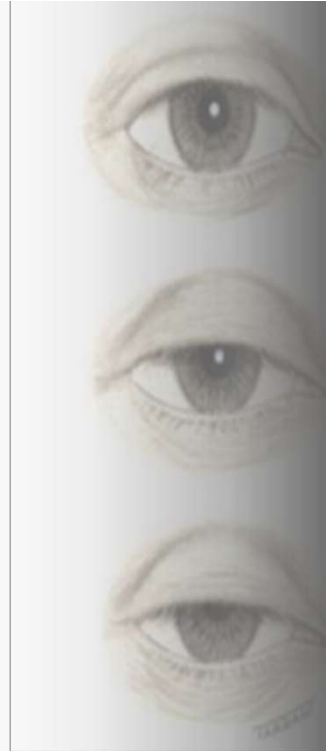
Work up for Horner syndrome in infants

In any child without a surgical history

- Brain, neck, and chest MRI with and without contrast (Chest X ray)
MR angiography
- Association of congenital Horner syndrome with ipsilateral **agenesis of the internal carotid artery**
- Possibility of **carotid dissection**, when forceful manipulation of the neck and additional neurologic deficits such as hemiplegia are detected
- **Urinary catecholamine** metabolite testing (R/O neuroblastoma)

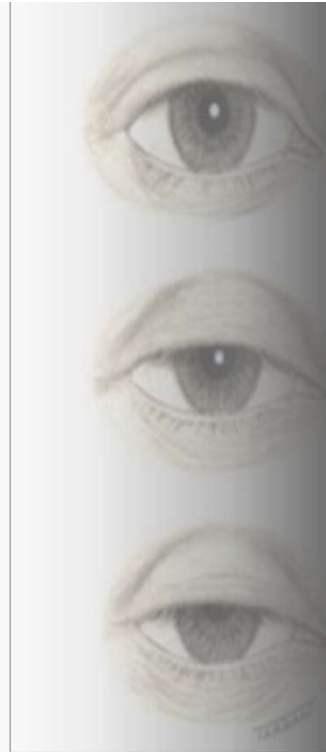
Acquired oculomotor palsy

- All patients with **partial** CN-III palsy must undergo urgent neuroimaging
- Most are ischemic(RF: DM, HTN)
- May be associated with pain, and resolve spontaneously with satisfactory levator function within 3 months. If a pupilsparing



Acquired oculomotor palsy

- An acute, isolated, pupil-sparing (but otherwise complete) CN III palsy in a patient older than 50 years with known vascular risk factors and without history of cancer does not necessarily require neuroimaging.
- Because the risk of missing an aneurysm can have devastating consequences, many clinicians obtain CTA and MRA studies for any acute CN III palsy.



Work up for Horner syndrome in adults

Determine the duration of the Horner syndrome from the patient's history and an examination of old photographs.

Imaging exception:

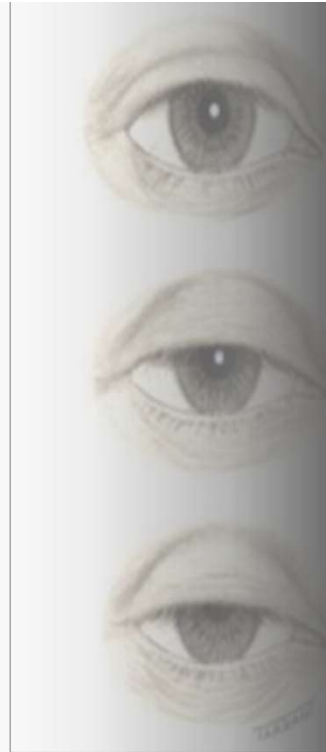
- **Iatrogenic** following neck, cervical spine, or thoracic apex surgery
- Any teenager or adult presenting with classic congenital HS with **iris heterochromia**. typically due to **brachial plexus injury** during birth



Fig. 23.33 Congenital Horner syndrome. A teenager presents with iris heterochromia and right ptosis with miosis present since birth. No further work-up is indicated

An old Horner syndrome is more likely to be benign.

- **CT** of the chest to evaluate lung apex for possible mass (e.g., Pancoast tumor).
- **MRI** of the brain and neck
- **MRA** or **CTA** of head/neck to evaluate for carotid artery dissection (especially with neck pain).



Myasthenia gravis

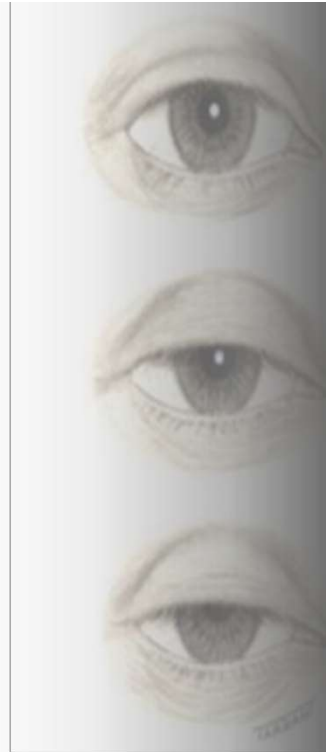
Disorder of neuromuscular junction transmission(Ach receptor antibody)

Periocular symptoms : 90%

initial manifestation in 75%

Ptosis is the most frequent clinical manifestation

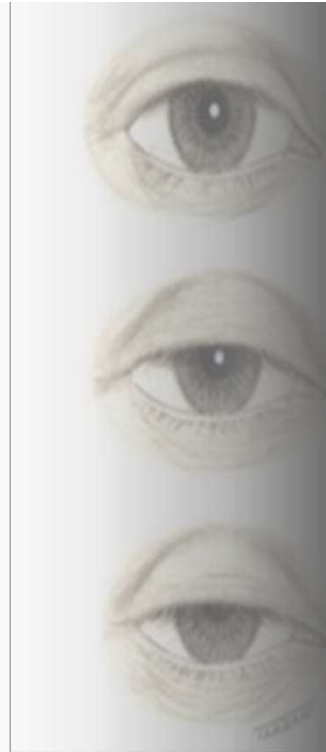
ocular myasthenia: 40% , develop generalized myasthenia 50–80% (**>50 Y**)



Myasthenia gravis

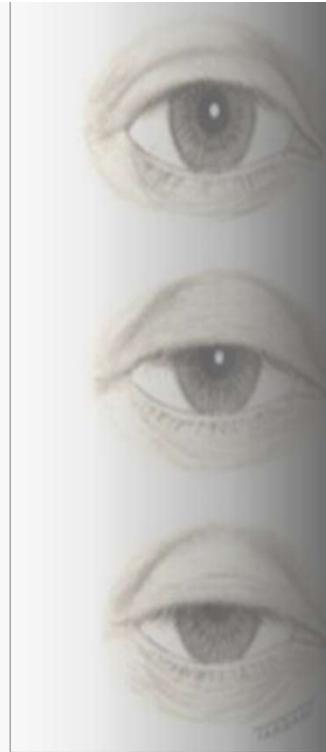
The diagnosis of MG can be made in a variety of ways, including:

- Clinical
- Serologic
- Pharmacologic test
- Electrophysiologic testing



Myasthenia gravis clinical diagnosis

Fluctuating ptosis and diplopia
essentially all ptosis, regardless of etiology,
appears to worsen toward the end of the day
the ptosis of MG is variable throughout the
day and may alternate sides.



Clinical Diagnosis

Cogan lid twitch:

After looking down for several seconds(10-15sec) , the patient is asked to make a **saccade** to primary gaze.

The upper lids may overshoot and then either become ptotic or **twitch** several times before settling into a stable position.

Caused by easy fatigability and rapid recovery in MG



Clinical Diagnosis

Rest test

- Baseline lid position and ocular deviation were examined and/or photographed
- Patient told to rest with their eyes closed for 30 minutes
- Lid position and ocular deviations again examined/photographed immediately after Photographs and measurements taken repeatedly over next 5-10 minutes

Clinical Diagnosis

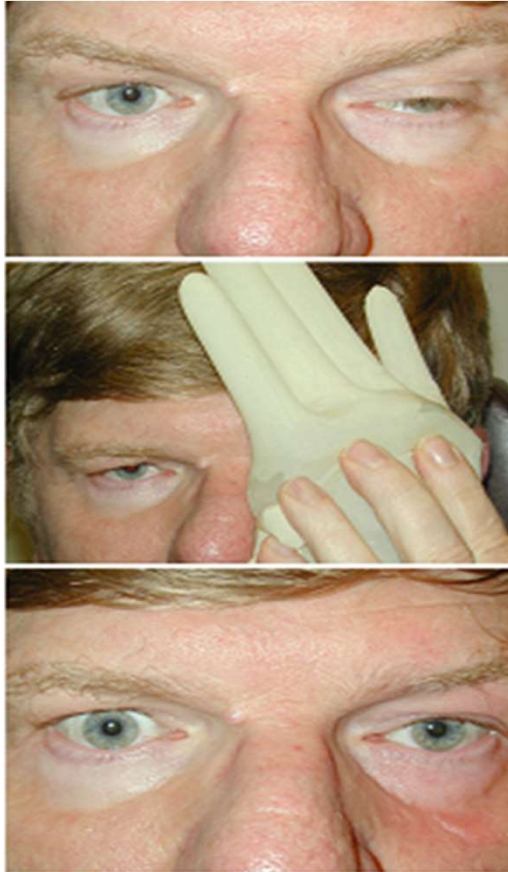


Fig. 23.28 Positive ice test. Top, initial clinical presentation. Middle, ice is applied to the eyelid, crushed for better contouring around the orbit. Bottom, 2 min later, a marked improvement in upper eyelid position is evident.

Ice Pack Test

- Ice testing is highly specific for MG, with a sensitivity of **80–90%**
- Reduced muscle temperature is thought to inhibit acetylcholinesterase activity
- Place ice pack on patient's eyelids for **two minutes**. Significant improvement of ptosis is suggestive of MG
- An improvement of **2 mm or more** in the patient's ptosis is considered positive
- Useful in helping rule out MG related ptosis

Serology testing

- 3 available acetylcholine receptor antibody assays – binding, modulating, and blocking is highly specific .
- Negative tests **20%** of MG, and one-half of OM , binding antibody has the highest sensitivity.
- If the ACH receptor antibody test is negative, then a muscle-specific receptor tyrosine kinase (MuSK)

Pharmacologic tests

- Edrophonium (Tensilon) Test
- Neostigmin test
- Pyridostigmine (Mestinon) therapy and diagnosis

✓ some experts advocate a trial of pyridostigmine (Mestinon) prior to offering surgery except in olds with a history of cardiac disease or asthma

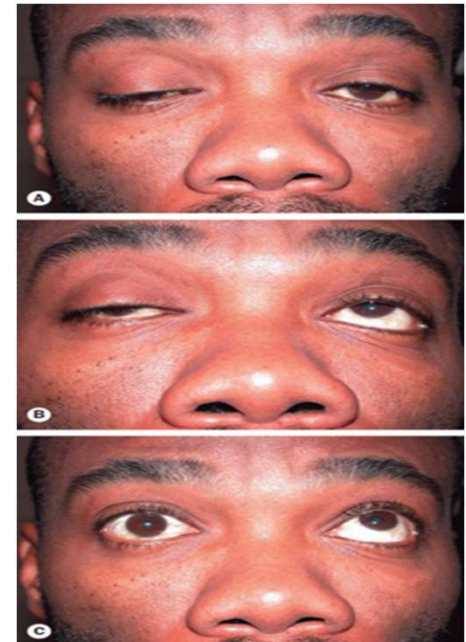


Fig. 19.88 Positive edrophonium test in myasthenia gravis. (A) Asymmetrical ptosis in the primary position; (B) defective upgaze; (C) following injection of edrophonium there is marked bilateral improvement of ptosis and modest improvement of left, but not right, upgaze

Diagnosis of Myasthenia Gravis

single-fiber EMG (SFEMG)

- Preferable to conventional EMG.
- In OM, SFEMG of the **deltoid** will not suffice; testing of either the **frontalis** or **orbicularis oculi** muscle must be performed.



Mechanical ptosis

Congenital: plexiform neurofibroma or hemangioma

Acquired: neoplasm, large chalazion, skin carcinoma,
Postsurgical or posttraumatic edema



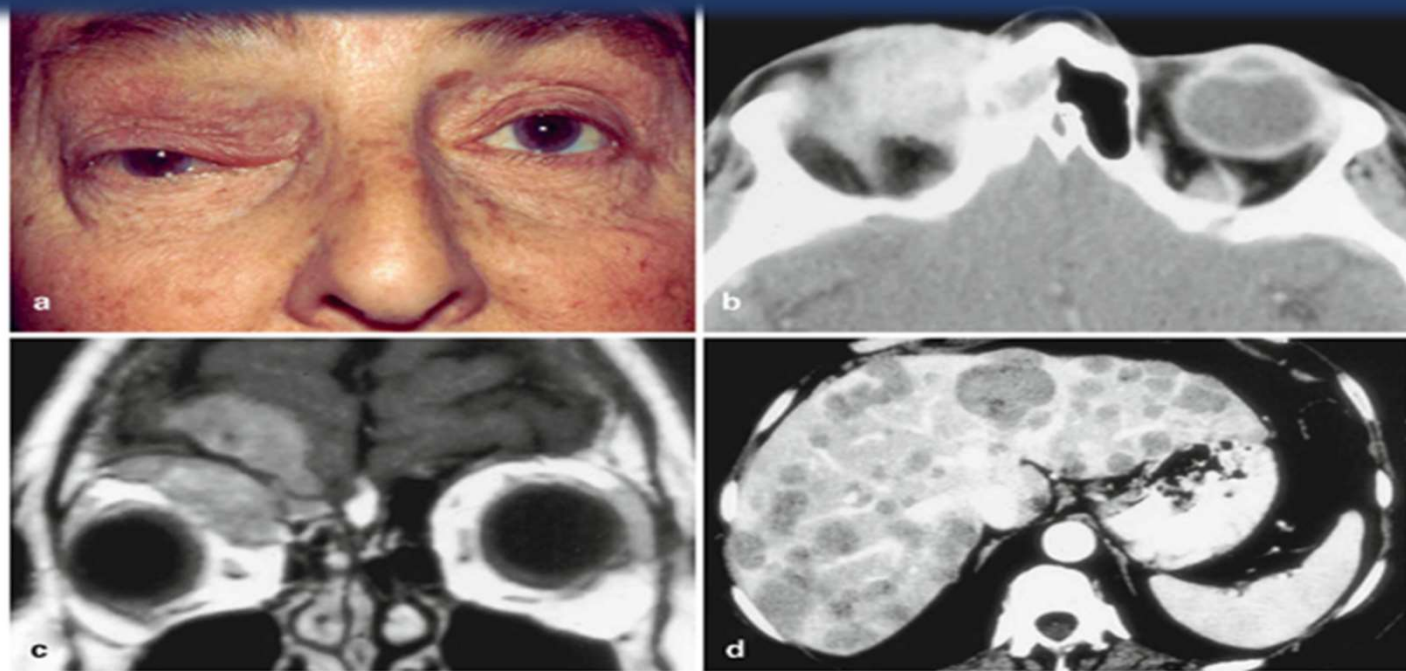


Fig. 23.9 Ptosis secondary to a superior orbital mass. (a) Clinical photograph of a patient presenting with ptosis 6 months after an automobile accident. A fixed, rubbery mass was palpated along the right superior orbital rim and a possible posttraumatic frontoethmoidal mucocoele was suspected.

(b) Axial CT views of the lesion. Bony erosion and possible intracranial extension was noted on other images. (c) MRI (T-1, postcontrast) delineated the intracranial extent. Biopsy showed metastatic lung carcinoma. (d) On systemic work-up, diffuse hepatic metastases were noted.



Traumatic ptosis

- Through **myogenic, aponeurotic, neurogenic, or mechanical** defects.
- Orbital and neurosurgical **procedures** can also lead to traumatic
- levator aponeurosis injury as a result of surgery: Cataract and trabeculectomy surgery have been shown to cause ptosis in up to 10–20% of cases
- Since such ptosis may resolve or improve **spontaneously**, the ophthalmologist typically observes the patient for an extended period before considering surgical intervention.

Management

In children if there is visual axis obscuration, Sx should be ASAP.

If there is significant VF restriction or lid drooping in down gaze ptosis is considered a functional problem, otherwise it's a cosmetic issue.

F/U: neurogenic ptosis due to ischemic 3rd N palsy,
Post op mechanical ptosis, post op aponeurotic ptosis

In severe ptosis with severe lag, like in CFEOM, crutch glasses can be used



The categories of surgical procedures

- External (transcutaneous) levator advancement
- Internal (transconjunctival) levator/tarsus/Müller muscle resection approaches
- Frontalis muscle suspensions

Methods

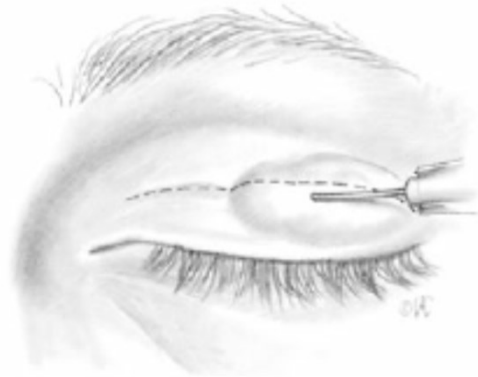
skin incision approach

Advantages

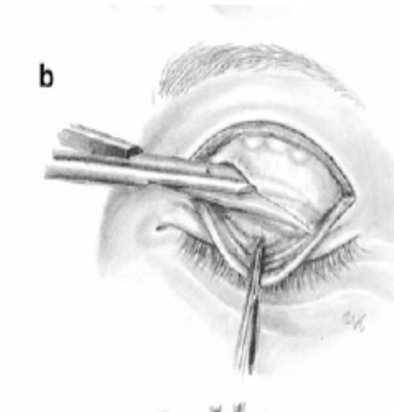
- The anatomy is easier to follow because the eyelid is not altered by eversion
- Important structures in the upper orbit are exposed (Whitnall's ligament and the medial and lateral horns), allowing a greater length of levator to be dissected and resected more easily
- Sutures can be advanced lower on the tarsus, enhancing the elevating effect;
- The location of the eyelid crease can be altered
- Excess skin can be excised simultaneously
- Bleeding can be controlled more easily

Transcutaneous levator resection

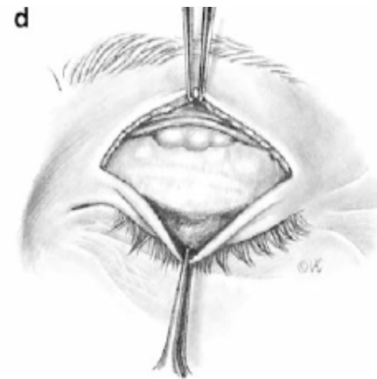
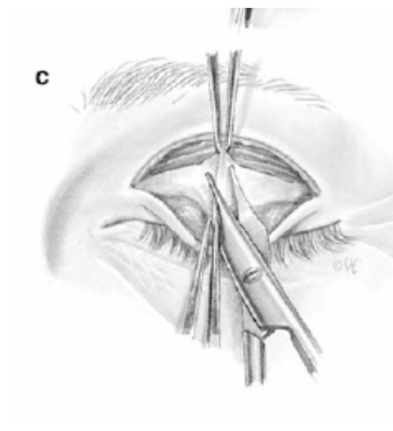
- Protective corneoscleral shield.
- Crease Marking
- The injection is made just below the skin.
- This will prevent any anesthetic effect on the levator or Müller's muscles.
- Usually, a 1–1.5 mL of local anesthetic is all that is necessary for ptosis repair



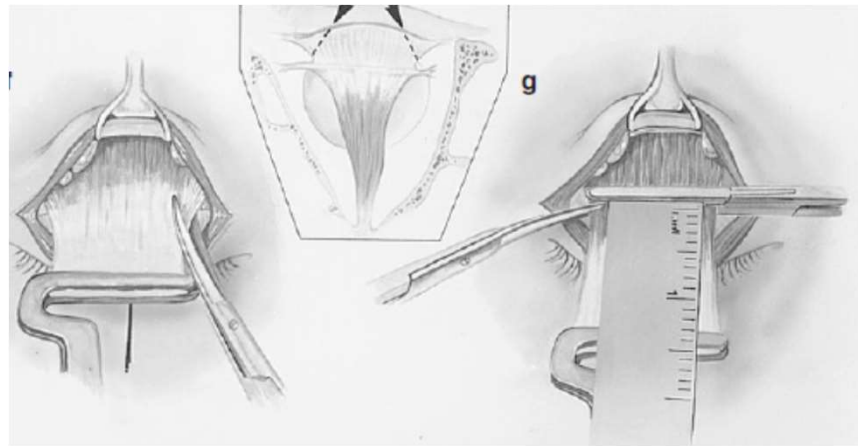
Transcutaneous levator resection



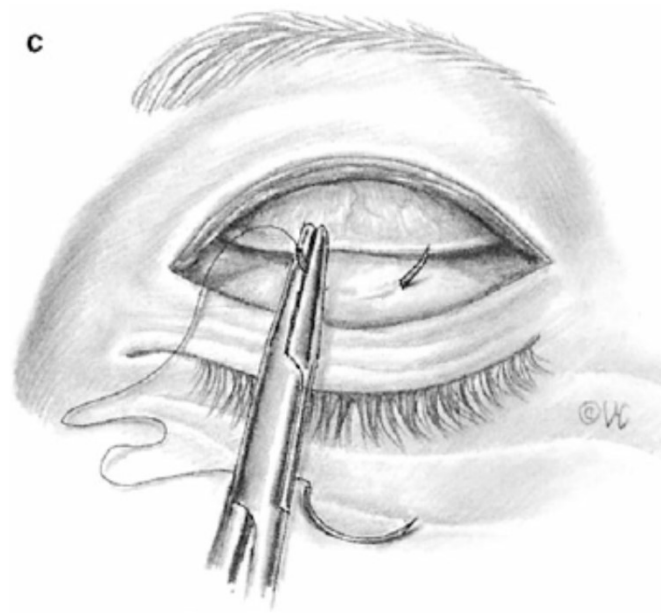
Transcutaneous levator resection



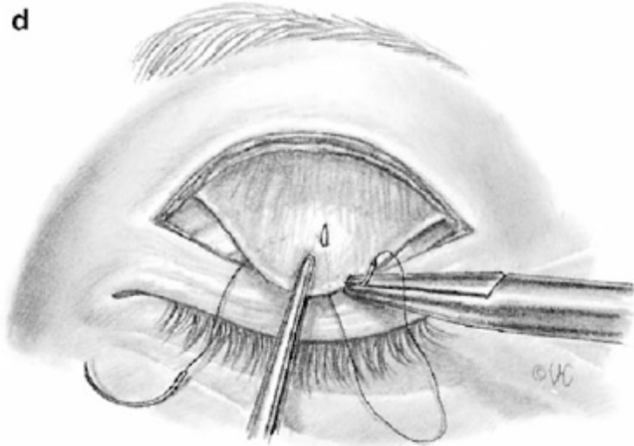
Transcutaneous levator resection



Transcutaneous levator resection



Transcutaneous levator resection



Transcutaneous levator resection





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After

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Müller's Muscle-Conjunctival Resection

- Good levator function and an appropriate positive response to phenylephrine testing
- Unilateral ptosis related to Horner's syndrome and anophthalmic socket.
- maintaining eyelid contour by avoiding tarsus resection and low reoperation rate,
- 90% symmetry compared to the fellow eye
- aggravate dry eyes

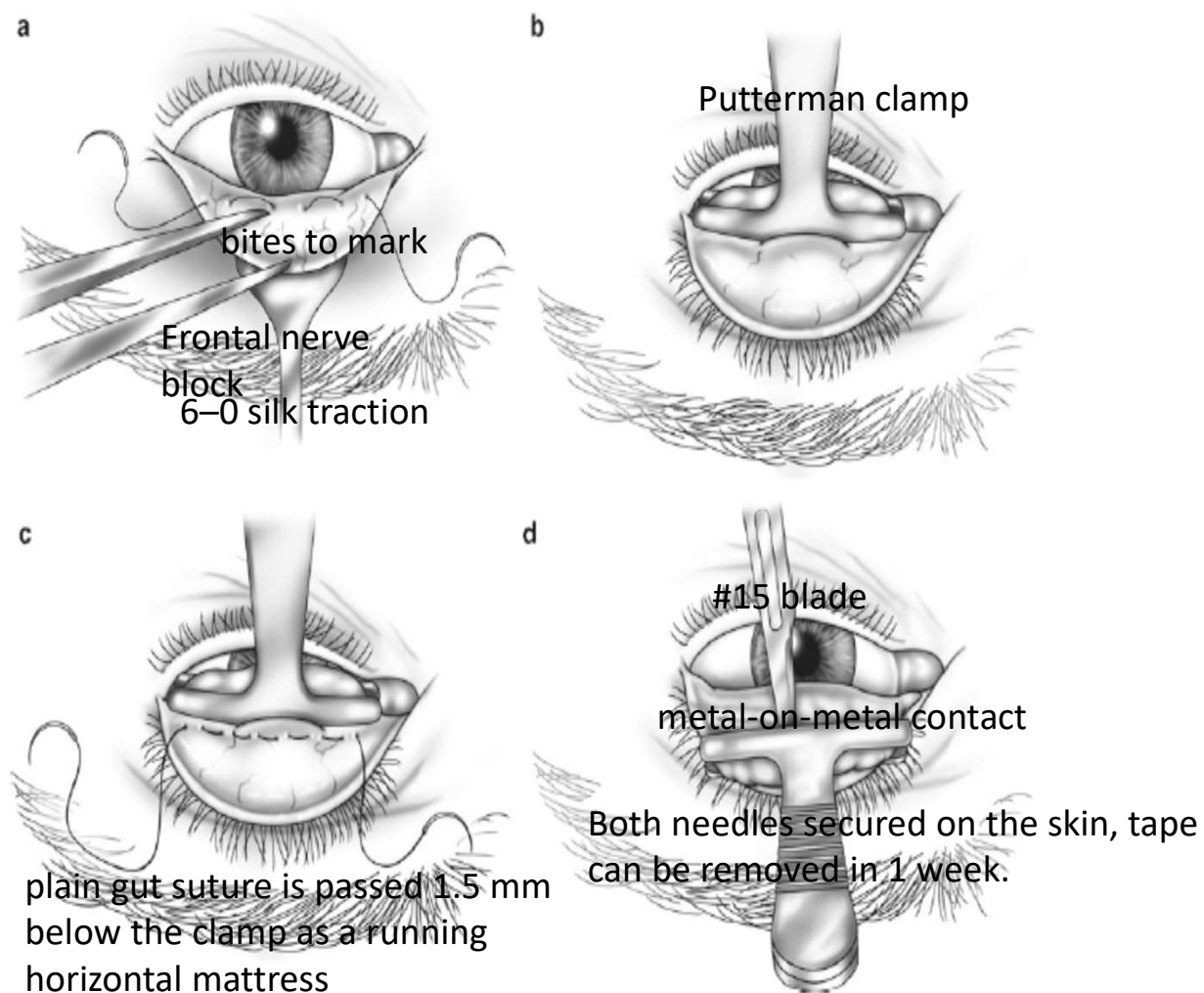


Fig. 26.11 (a) A marking suture is placed a predetermined distance from the superior tarsal border. (b) A clamp is placed, which now contains conjunctiva and Müller's muscle. (c) A 6-0 plain gut suture is

placed superior to the clamp in a running mattress fashion. (d) The tissue within the clamp is removed with the blade, maintaining a metal-on-metal feel to minimize the chances of cutting the suture

Conjunctival approach



Sling

Frontalis suspension procedure

- The normal frontalis muscle has 10-15mm of action which can be transferred directly to the eyelid if it is connected to the eyelid.

Frontalis Suspension or Sling

- Standard technique for the correction of severe ptosis with poor or no levator muscle function.



Materials for suspension

- Autogenous fascia (Best long –term result)
- Banked fascia
- Synthetic material

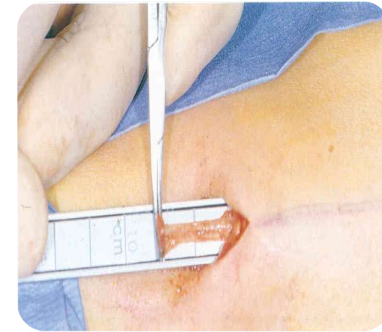
Stored fascia lata (banked irradiated fascia lata)

- rate recurrence of ptosis (50% - 8year)
- Considered as an alternative suspensory material in children younger than 3 year with congenital ptosis

Material

Autogenous material

- Fascia lata
- Temporalis fascia
- Palmaris longus tendon



Material

Autogenous material

- Stored fascia lata
- Prolene
- Supramid: Use for temporary procedure
- Mersilen mesh
- Silicone

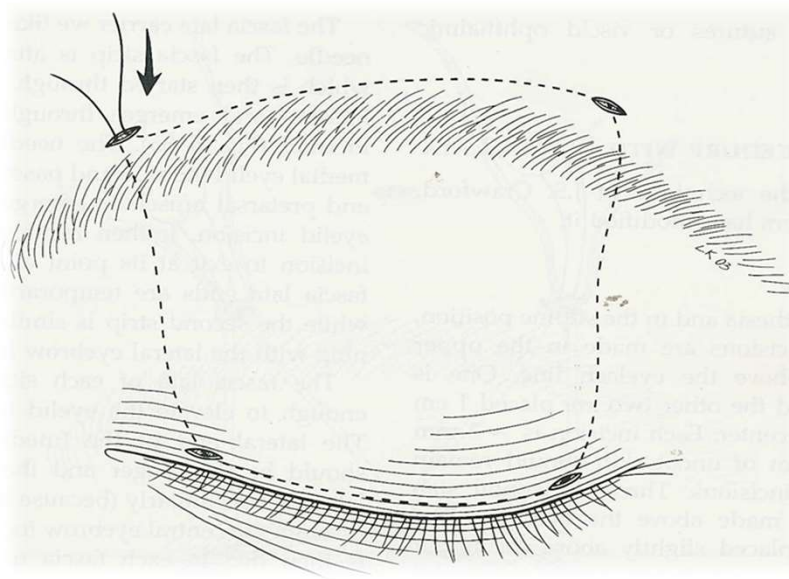


Silicon

- **Silicone cord**
- Silicon is **effective** material in severe ptosis with poor levator function
- **Elasticity and ease of adjustment** with a minimal or absent bell phenomenon
- MG-3th CN palsy – CPEO

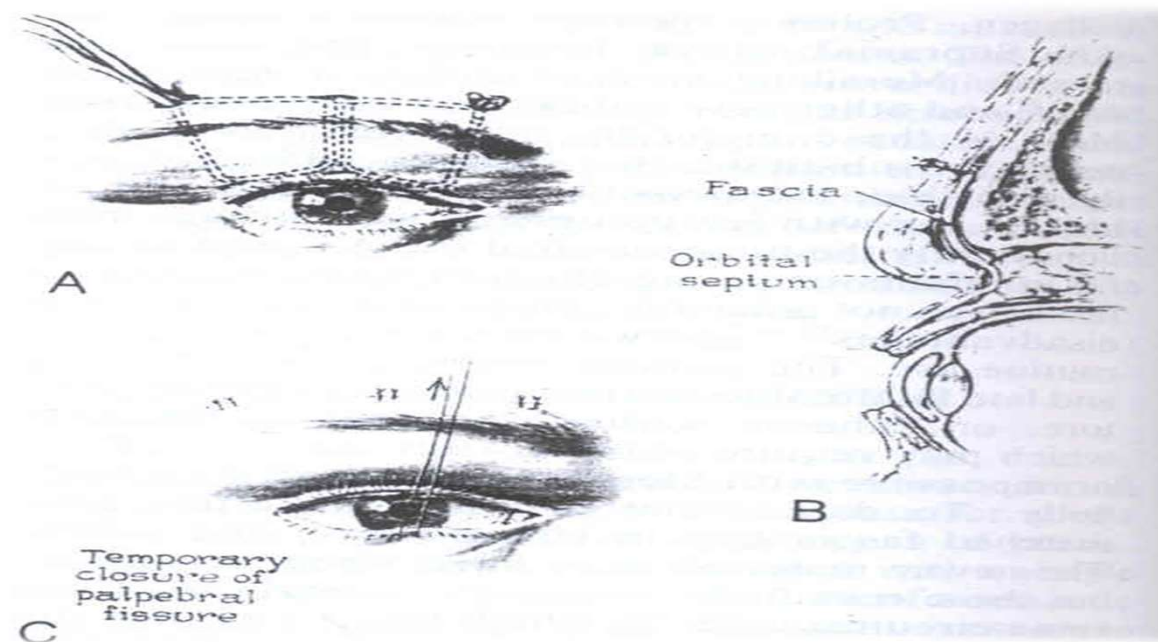
Surgical techniques

Trapezoid



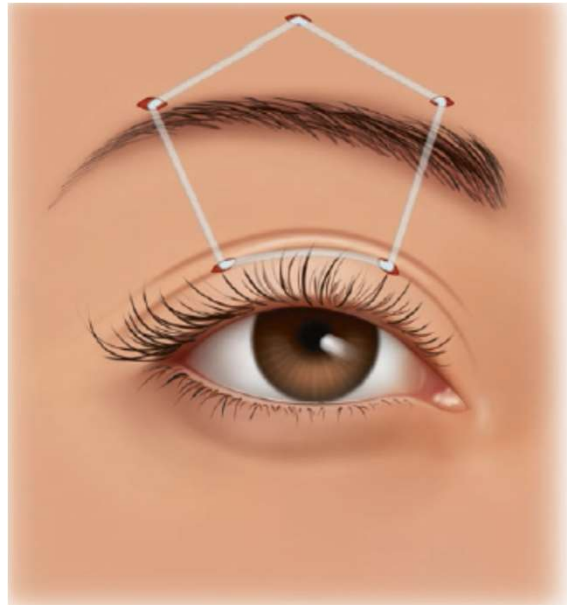
Surgical techniques

Double rhomboid



Surgical techniques

Fox pentagon



Surgical techniques

Double triangle



Indication for synthetic materials

Infants

Patients in whom it is less desirable to harvest fascia lata

Patients with myopathy

Frontalis Suspension or Sling

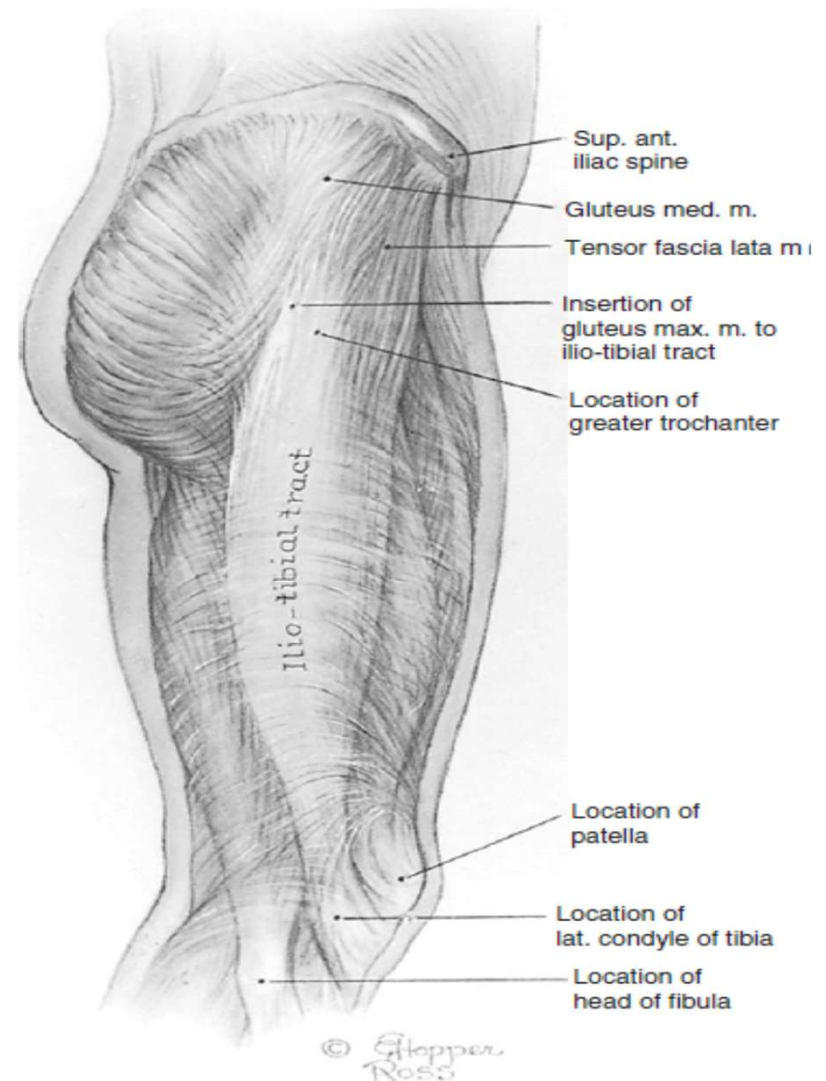
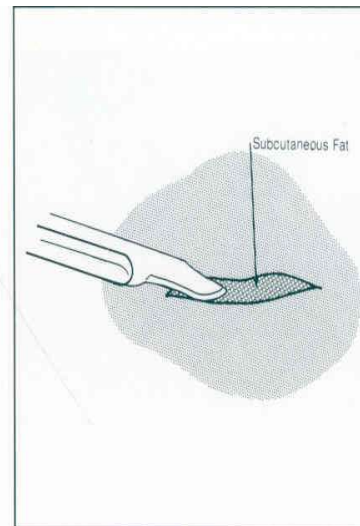
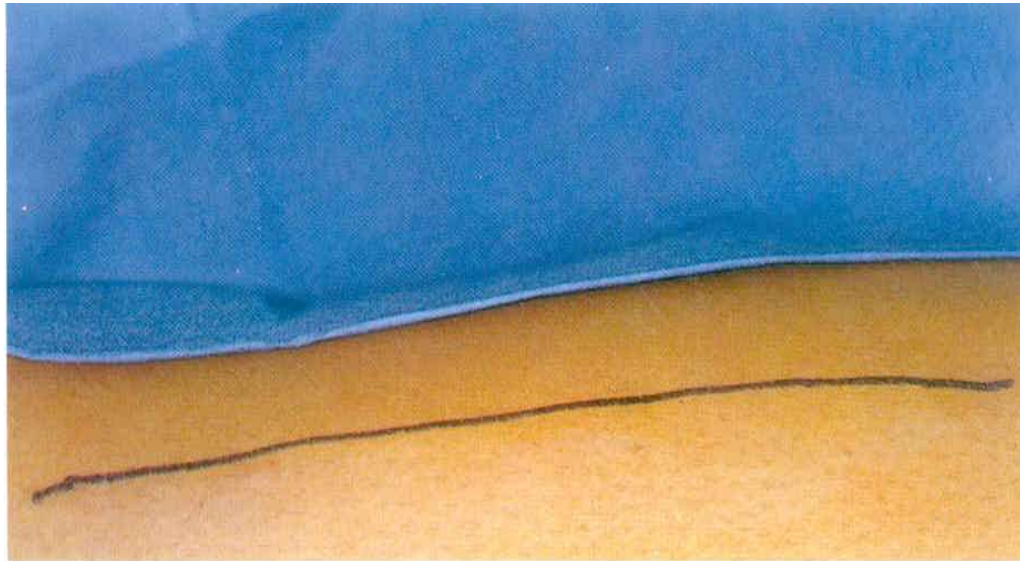


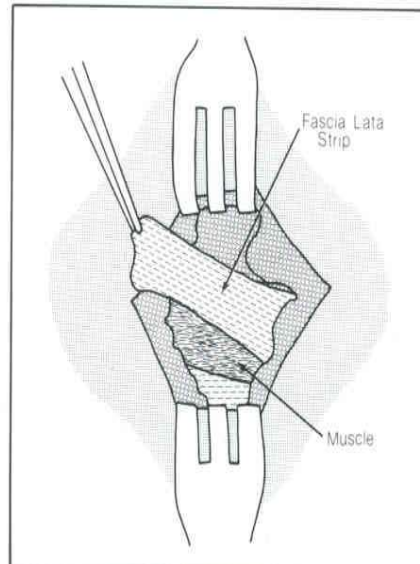
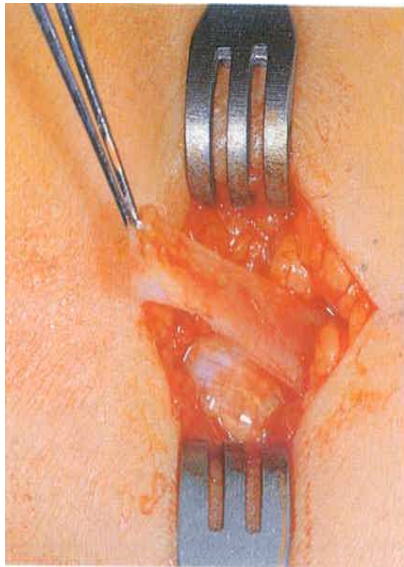
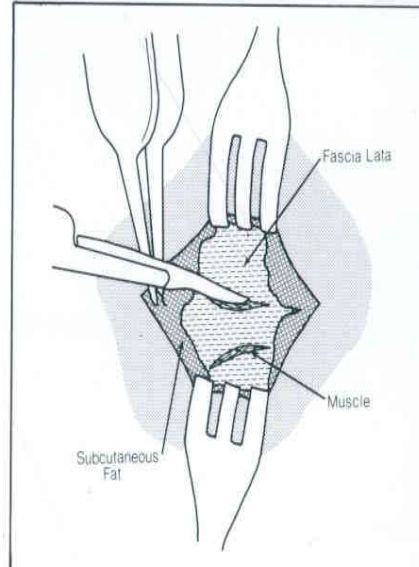
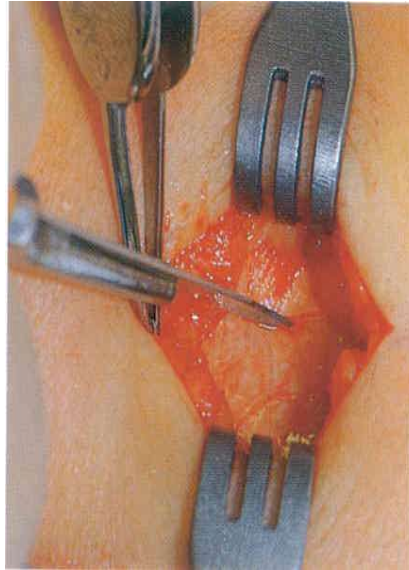
Fig. 16.2 Diagram of muscles of leg demonstrating position of fascia lata

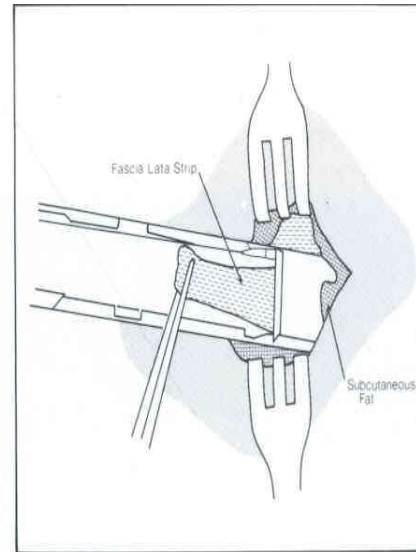
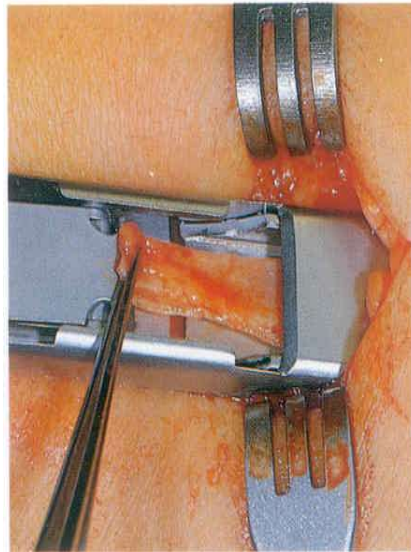
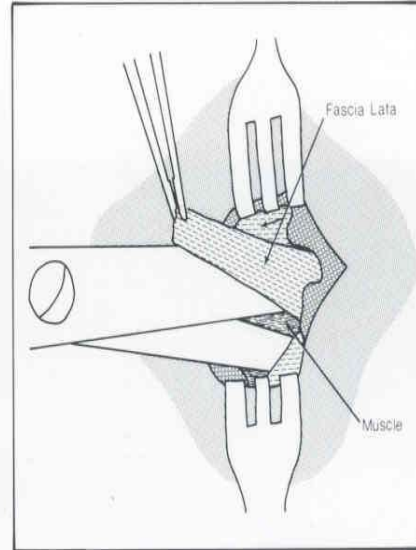
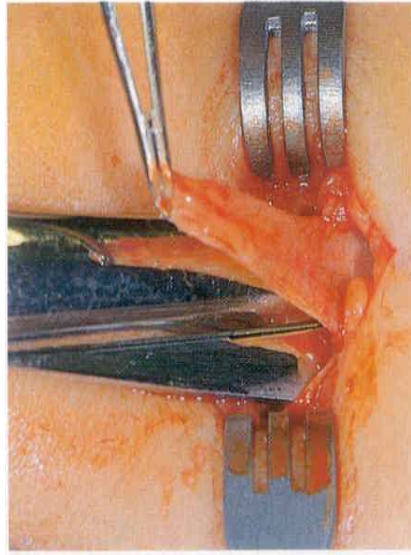
Frontalis Suspension or Sling

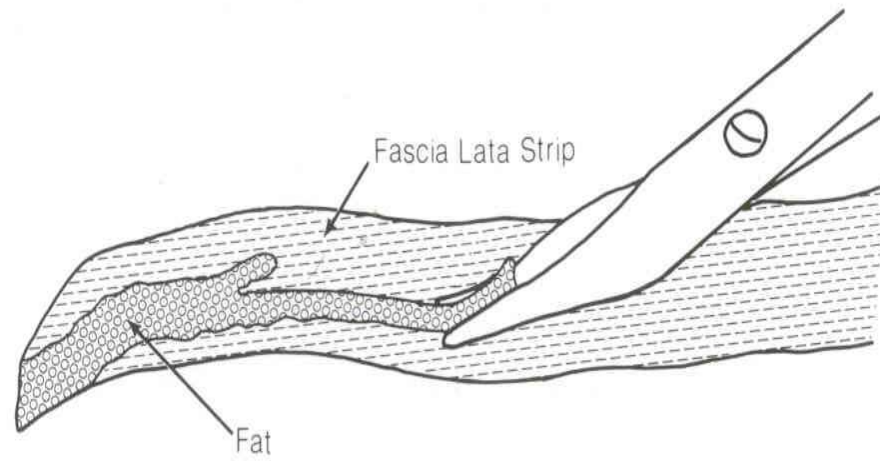
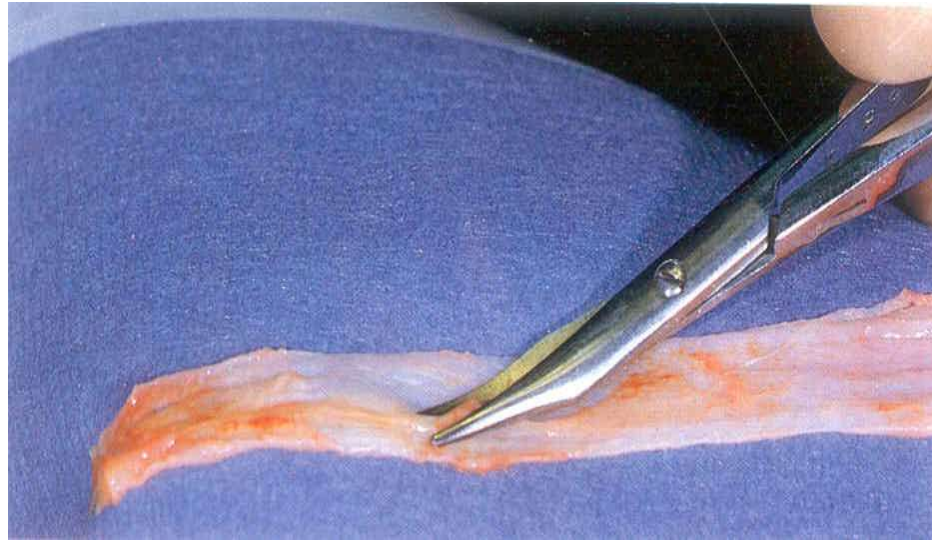


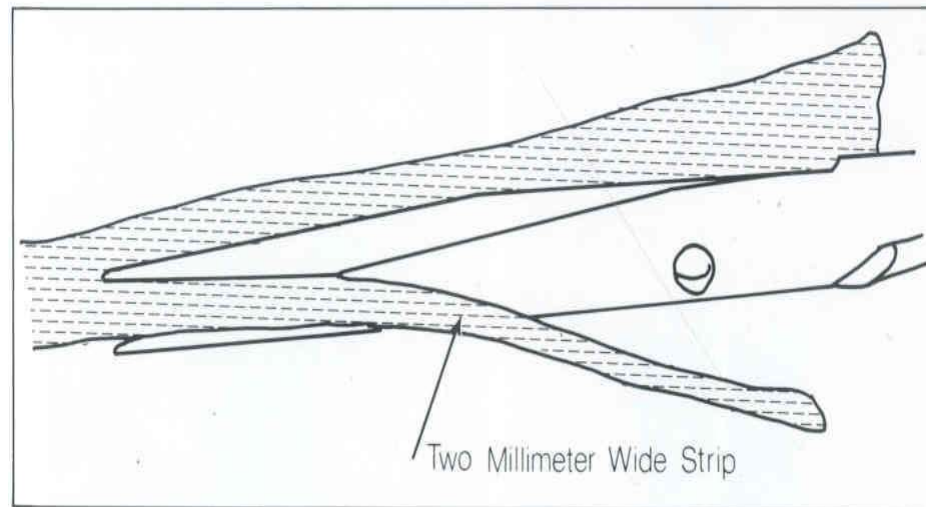
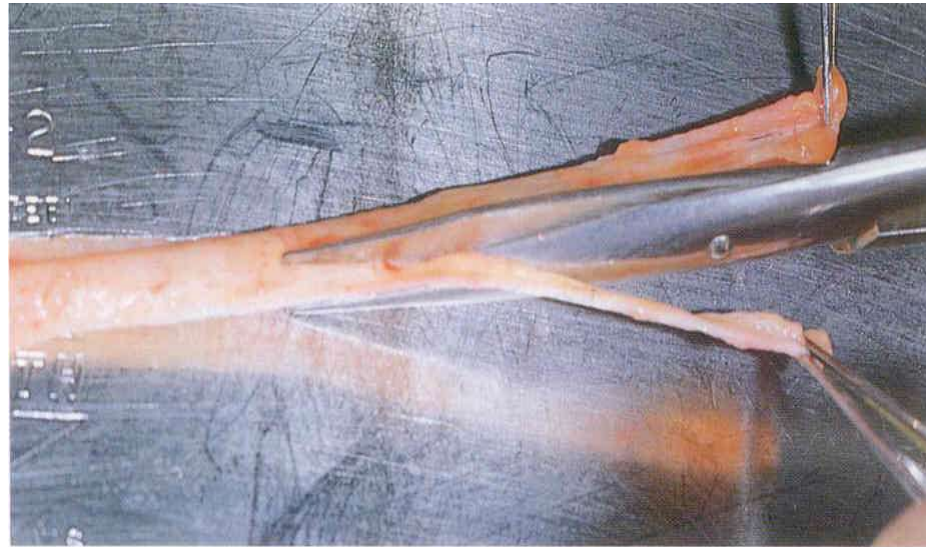
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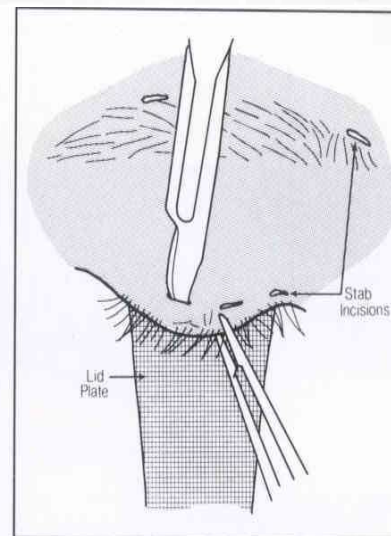
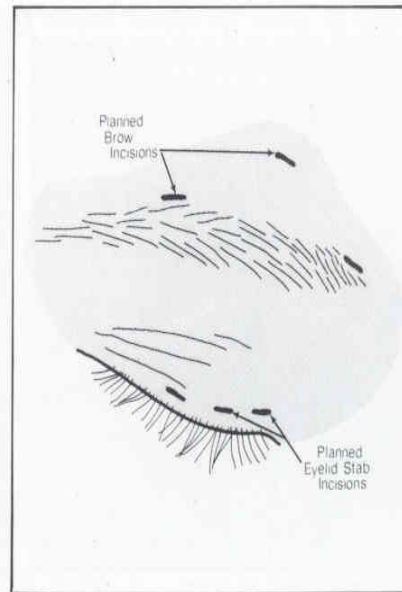


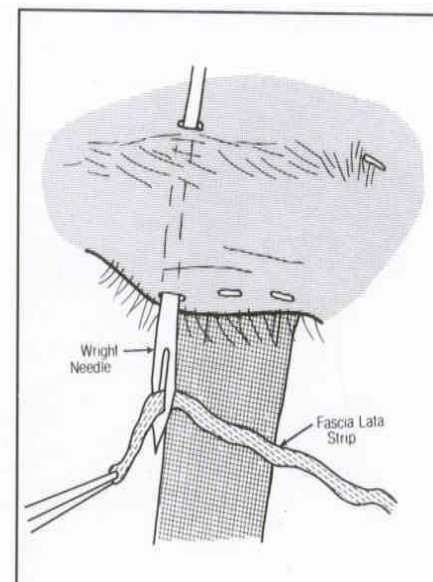
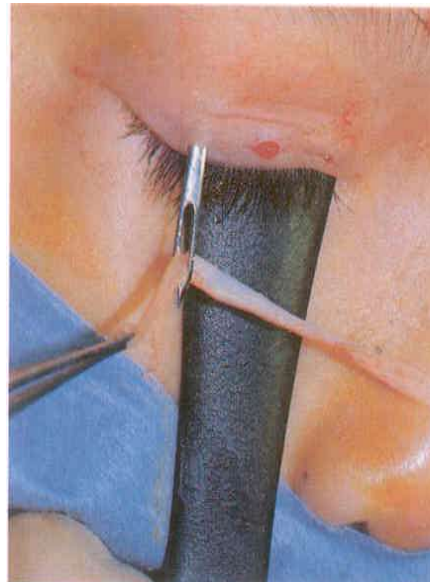
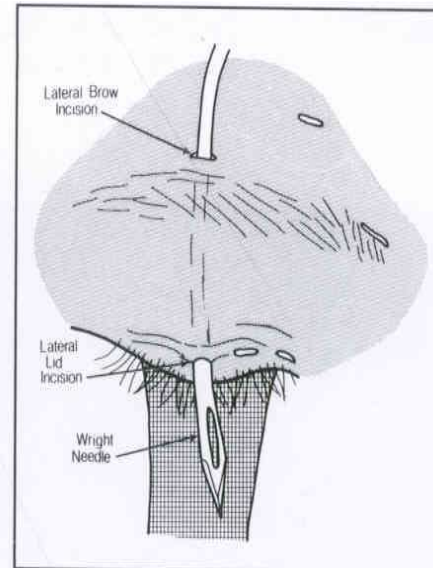
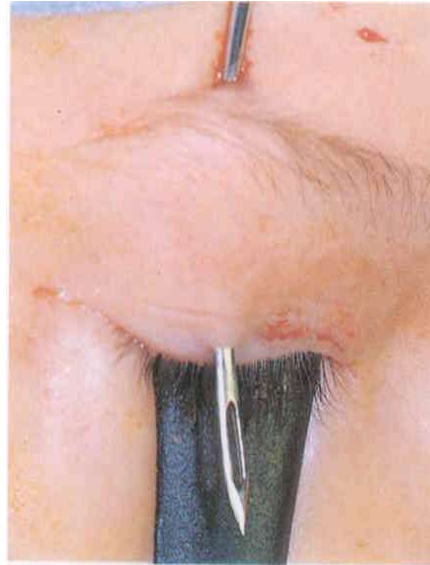


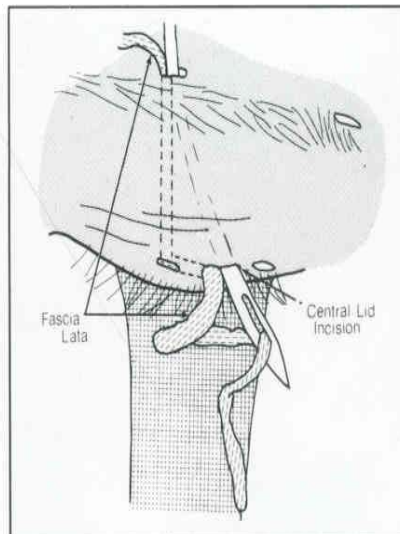
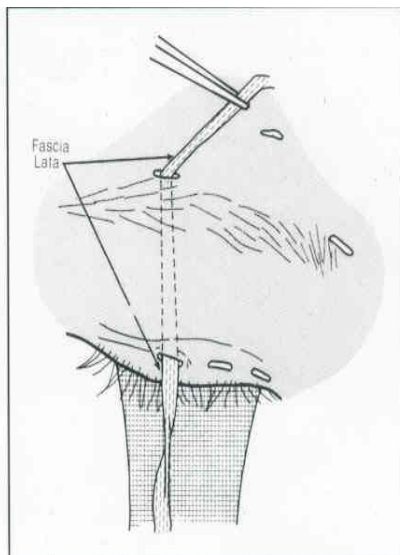


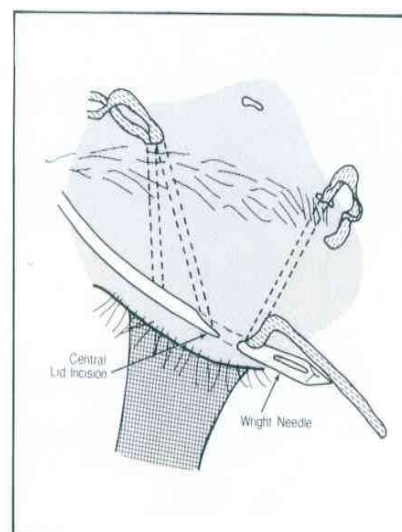
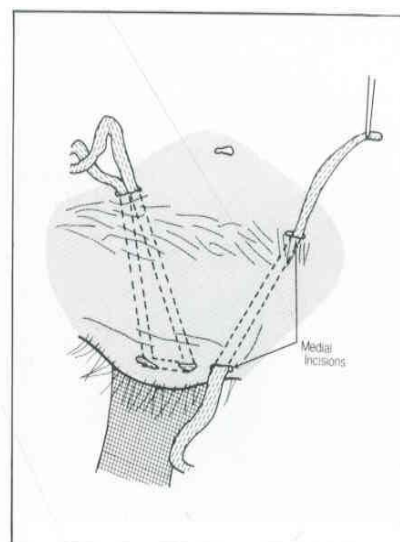


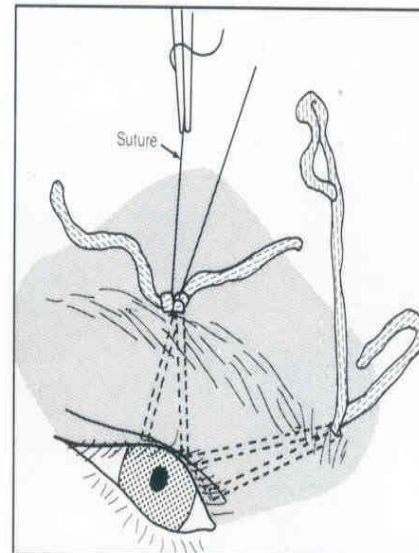
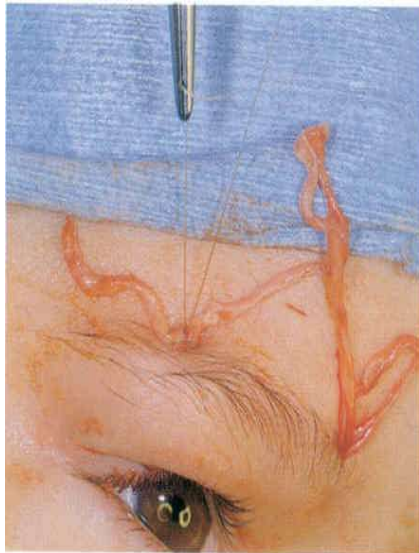
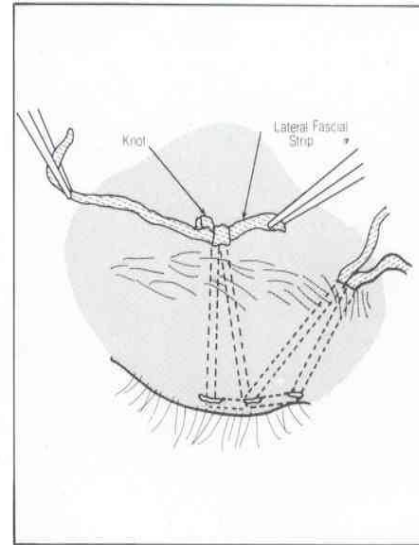


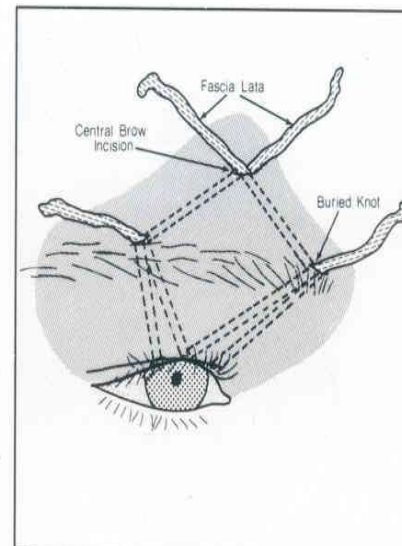
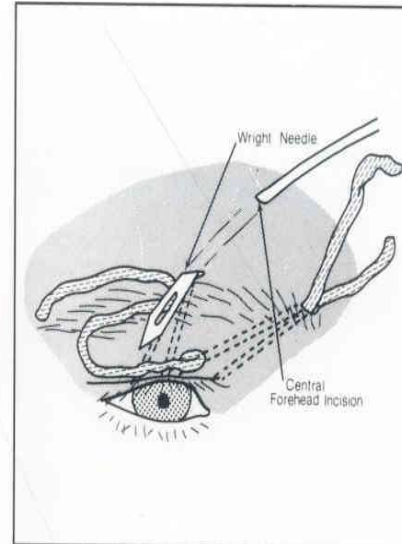


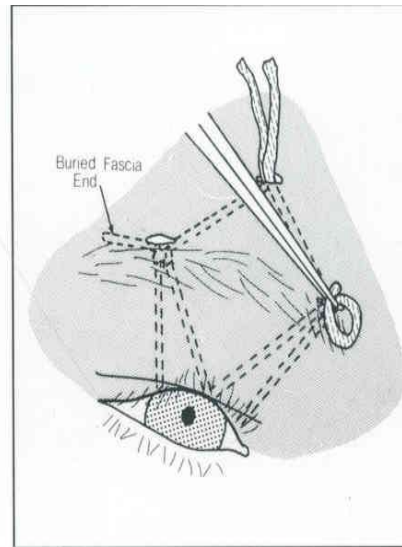
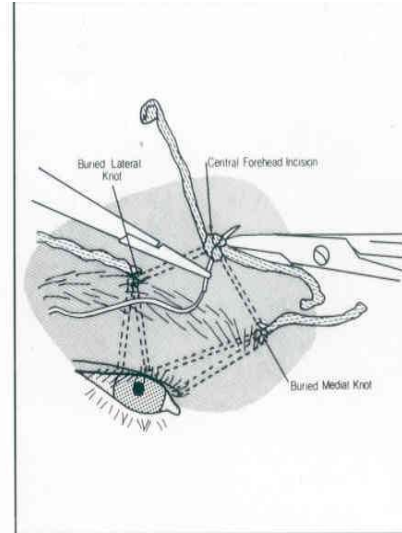
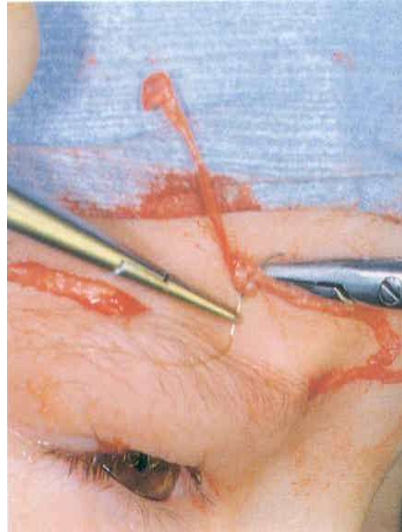


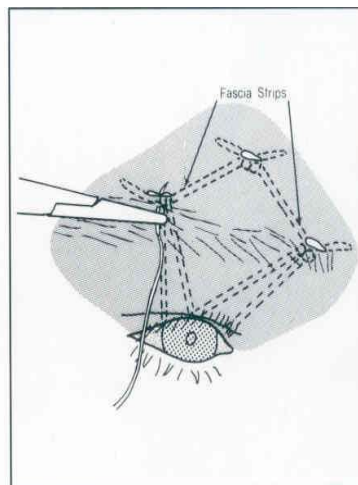




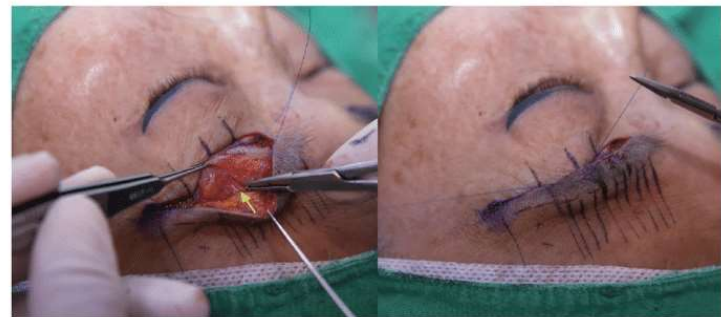
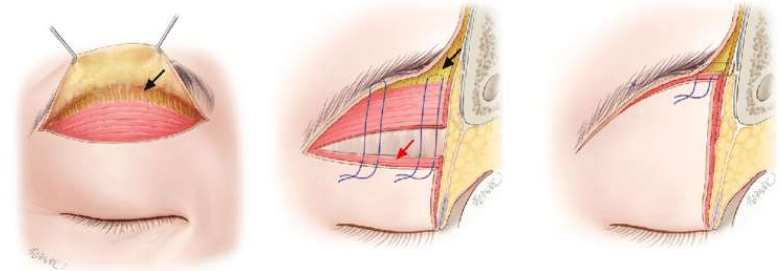
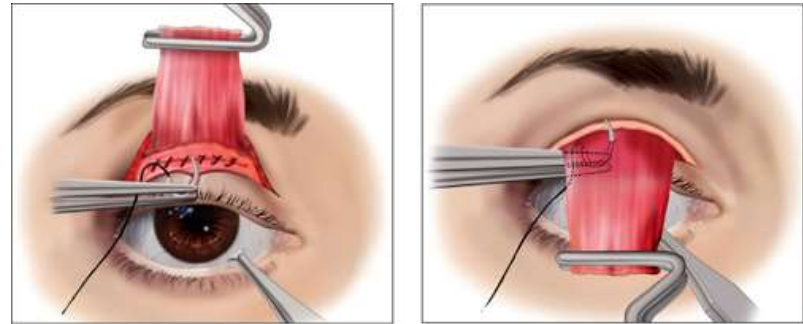
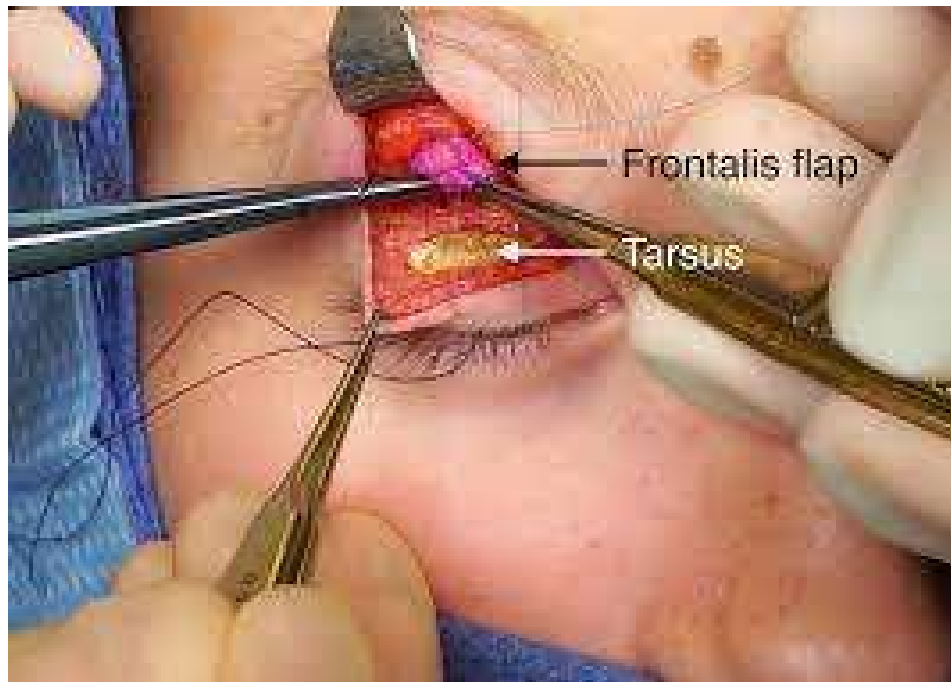




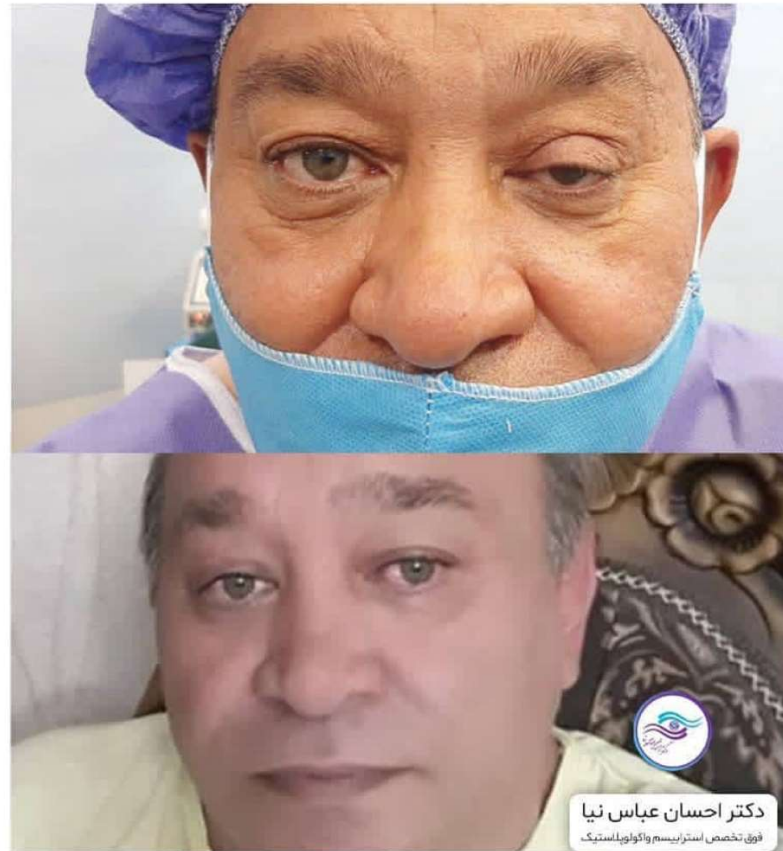




Frontalis Suspension or Sling



Frontalis Suspension or Sling





dr ehsan abbasnia
Ophthalmologist

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