Ptosis

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Ptosis

- What is the cause?
- How is it best treated?

Aetiology

- Congenital
- Acquired

Congenital Ptosis

- Simple
- Syndromic – Marcus Gunn jaw-winking
  - Blepharophimosis
  - others (Saethre Chotzen, ocular fibrosis, Noonan's etc)
- Neurogenic – Horner's, 3rd nerve palsy

Acquired Ptosis

- Neurogenic (3rd nerve, Horner's syndrome)
- Myogenic (myopathies, myasthenia)
- Aponeurotic (involutional, some trauma)
- Mechanical (lid lumps)

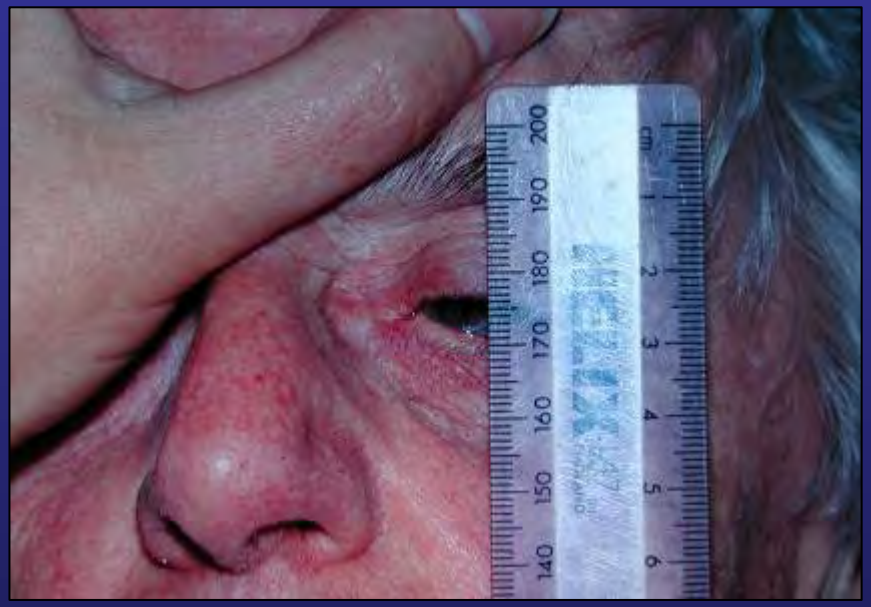
Ptosis Assessment

- History (onset, variability, associated symptoms such as diplopia)
- Examination

Ptosis Examination

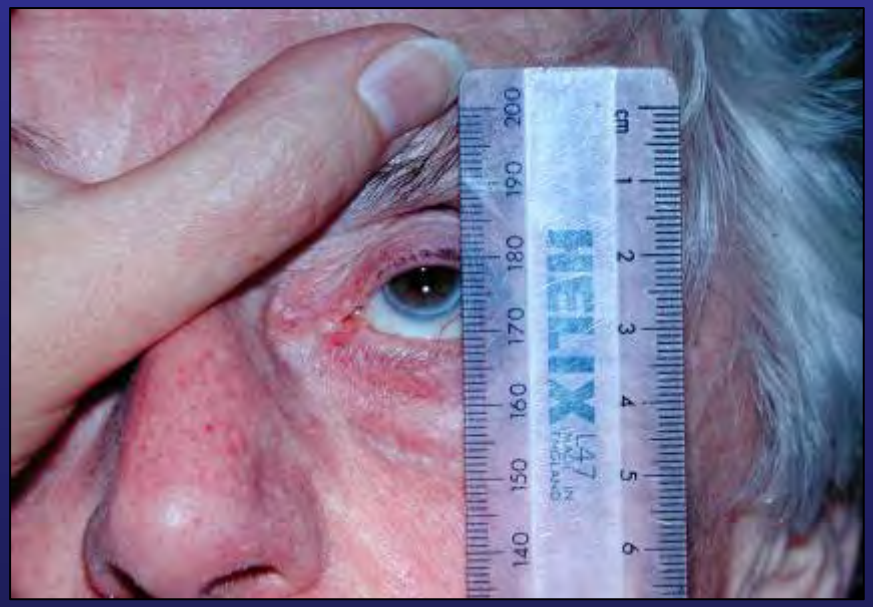
- Degree of ptosis
- Levator muscle function
- Lid crease position
- Eye movements
- Pupils
- Tear film
- Corneal sensation

Degree of Ptosis



Normal upper lid position: 2mm below superior limbus (9mm above inferior limbus)

Levator Muscle Function

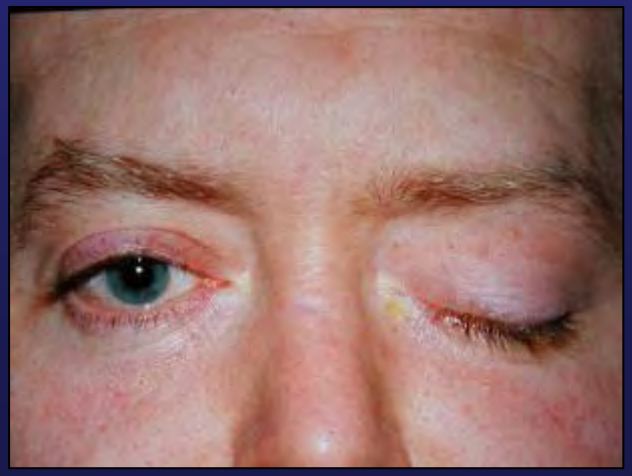


Normal: 12-15 mm

Lid crease position

Eye Movements

Pupils



Simple Congenital Ptosis

- Localised “dystrophic” levator muscle
- Reduced levator muscle function
- Strong association with amblyopia (refer early)
- Surgery depends on levator function (lid excursion)
- If >5-6 mm, levator resection (12-25mm)
- If <5-6 mm, brow suspension

Levator Resection (for congenital ptosis)

- Mild ptosis (2mm), good LF (10mm+)
  - 12-16 mm resection
- Moderate ptosis (3mm), moderate LF (7-10mm)
  - 18-22 mm resection
- Severe ptosis (4mm), poor LF (5-7mm)
  - 24-26 mm resection

Brow Suspension

- Severe congenital ptosis with poor LF
- Blepharophimosis syndrome
- Myopathic ptosis with reduced LF (conservative elevation to allow good closure)
- 3rd nerve palsy (poor or no LF)

Involutional Ptosis

- Commonest cause of ptosis in the elderly
- Unilateral, bilateral, asymmetric
- Well preserved LF
- Elevated lid crease
- Aponeurotic dehiscence or disinsertion
- Lid drops on down gaze
- Beware of contralateral lid drop after unilateral surgery

Surgery for Involutional Ptosis

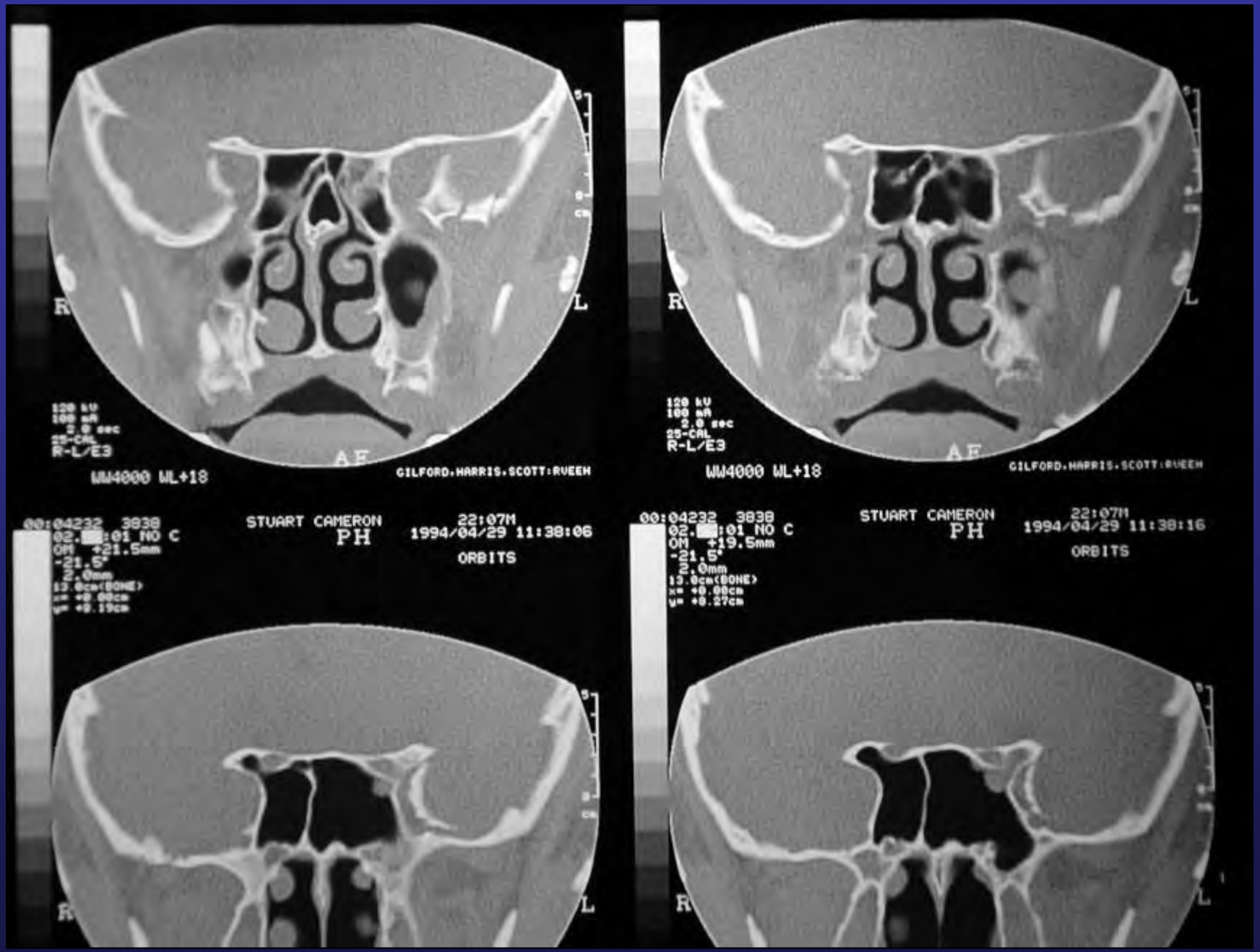
- Mark lid crease, any skin for excision (cautious)
- Local anaesthesia (small volume)
- Excise skin if required
- Dissect to tarsal plate (deep to orbicularis)
- Open orbital septum (identify pre-aponeurotic fat pad)
- Identify levator aponeurosis

Surgery for Involutional Ptosis

- Advance, shorten and reattach levator aponeurosis to tarsal plate (central suture)
- Check lid height, adjust (aim 1-2 mm above post-op height)
- Insert medial and lateral sutures, check contour, adjust
- Reform skin crease (orbicularis to levator)
- Close skin

Traumatic Ptosis

- Multi-factorial
- Nerve damage
- Muscle damage, scarring
- Aponeurosis damage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2 months

5 days after punch in right eye

1 month later

3 months later

6 months later

Traumatic ptosis – age 2.5

Traumatic ptosis in amblyogenic age group

- If visual axis obscured, early temporary (reversible) sling (silicone, prolene etc)
- If visual axis clear, await spontaneous recovery
- Standard amblyopia therapy
- Definitive ptosis surgery electively

Penetrating lid trauma

Penetrating lid trauma

- Carefully explore wound, enlarge only if necessary
- Re-approximate tissues in layers
- Wait
- Late ptosis repair if needed

At 2 weeks ….

12 months …

Residual traumatic ptosis

- Repair under local anaesthesia
- Levator shortening as required

Ptosis

- Establish cause
- Examination critical for operative planning
- Surgery determined by cause, levator function

Involutional Ptosis Repair

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Steps

- Mark crease
- LA
- Incision through skin and orbicularis
- Dissection of tarsus, septum and LPS
- Placement of sutures
- Checking level and contour
- Adjustment of sutures if needed
- Skin crease reformation

Mark skin crease

- Match the other side in unilateral cases
- Set the crease at the desired level in bilateral cases (6-10 mm in caucasians, higher in women, lower in Asian lids)

Inject LA

- Use minimal sedation
- Mixture of lignocaine 2% with 1:200,000 adrenaline and marcaine 0.5% with 1:200,000 adrenaline
- Use small volume, subcutaneously along the marked crease – 1 – 1.5mls

Skin crease incision

Opening orbicularis

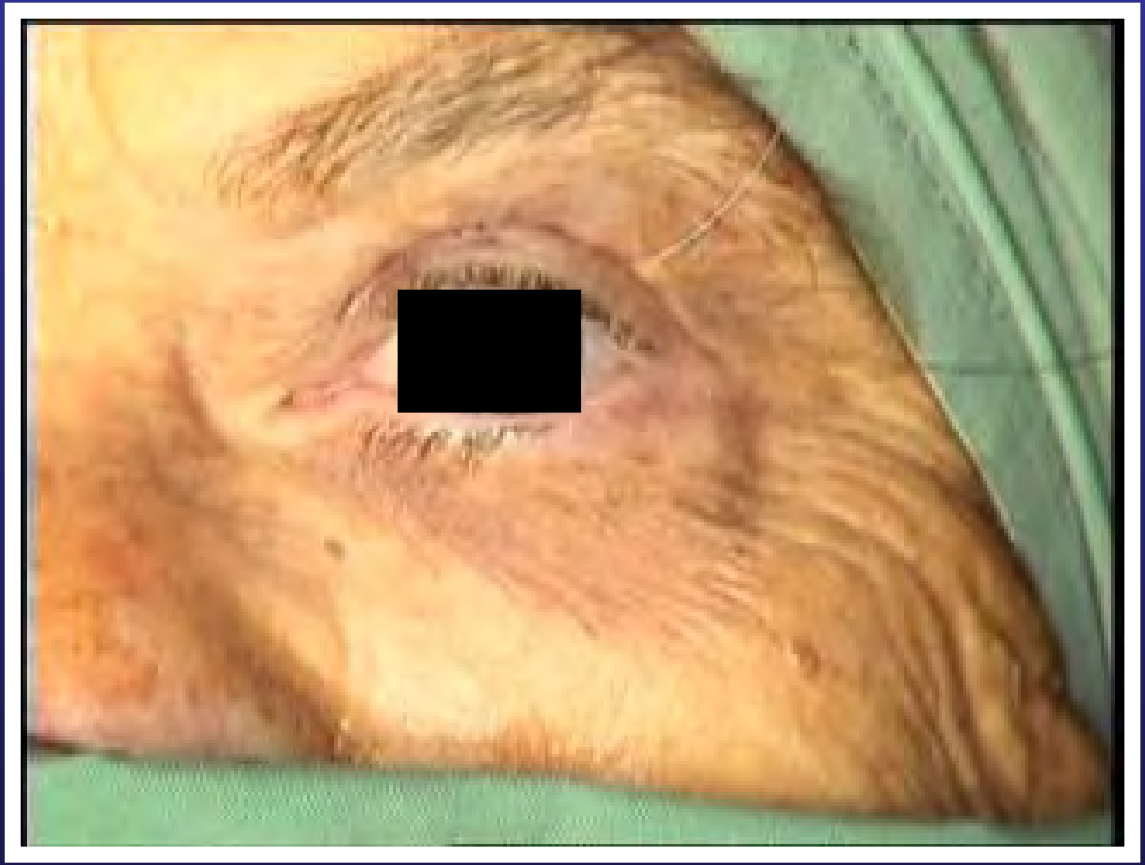
Dissection to tarsal plate

Opening orbital septum

Selecting the suture position

Placing the central suture

Check height and contour



Medial and lateral sutures

Recheck level and contour

Skin crease reformation

Skin closure

Post-operative care

- Bilateral cases – pad and ice-packs for an hour
- Unilateral cases – double pad overnight
- Antibiotic ointment to wound tds, lubricants to eye as required