

# Chapter 2

## Blepharoplasty

**Robert Caulfield**

*Refers to adjustment or re-shaping of the appearance of the upper or lower eyelids. Beware the lower lid, skin shortage and ectropion.*

### Recognition

In the upper lid, patients often present with a degree of cutaneous hooding concealing all or part of the upper eyelid itself in forward gaze. In the lower lid, they present with ‘bags’, i.e., post-septal fat pads bulging behind a weakened septum. (N.B. Must be aware of co-existing ptosis, as surgical correction is different, as well as any compensated brow ptosis, which may require brow-lifting prior to any upper lid blepharoplasty) (Fig. 2.1).

### History

#### *General introduction*

Age, occupation, psychological reasons, interference with lifestyle, relationships. General medical conditions such as diabetes and thyroid disease which may also affect the eyes.

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FIGURE 2.1 Pre-operative blepharoplasty candidate

### *Specific eyes*

- Any pre-existing eye disease or defect
- Does the patient wear glasses, contact lenses or combination of both? (N.B. Contact lenses are commonest cause of ptosis in young adults, due to stretching of levator aponeurosis)
- Any history of glaucoma
- Dry eyes
- Excessive tearing (epiphora)
- Redness/soreness
- Double vision (diplopia)
- Any previous aesthetic lid surgery
- Family history: As puffy lower eyelids are often familial and such patients may seek advice at a relatively young age
- Patient's expectations of outcome achieved by surgery
- Awareness of risks and complications associated with surgery

### *Risk factors*

- Any pre-existing eye disease must be documented very clearly pre-op in terms of visual function and fields
- Any significant past medical history of cardiac, GI or respiratory problems (this can potentially interfere with post-op recovery/mobilisation and increase risk of complications)
- Smoking

- Medication (aspirin, NSAIDs, herbal medications, anticoagulants)
- Bleeding tendencies (increased risk of bleeding following post-septal fat excision – risk of retro-orbital haematoma and blindness)
- Hypertension
- Diabetes

### *General*

Full medical and drug history

- Must consider co-existing morbidities relative to risks of procedure (as essentially a cosmetic procedure)
- Full list of medications such as aspirin, NSAIDs, herbal medications, anticoagulants – which can result in catastrophic retro-orbital haematoma (as above)
- Any psychological issues (i.e., is patient requesting surgery for genuine reasons)
- Occupation and sporting hobbies
- Any drug allergies
- Smoking (associated with increased risk of wound breakdown/delayed healing)

*AIM: By the end of history you should know*

1. Extent of patient's symptoms, e.g., hooding causing interference with visual fields or purely aesthetic reasons
2. Need for additional investigations/treatment of any co-morbidities prior to surgery
3. Patient's awareness of risks/complications
4. What the patient hopes to achieve
5. Chances of surgery meeting these objectives

## Examination

*Note: Should always have routine assessment by ophthalmologist of patient's visual fields and visual acuity (both with and without glasses and contact lenses) prior to any surgery.*

*N.B. Patient and examiner should sit opposite each other with their eyes at a similar height and the patient in direct forward gaze.*

### *Look*

#### Eyes

- Any obvious eyelid pathology, e.g., BCCs, SCCs, skin tags, cysts
- Any pre-existing scars
- Skin quality of both upper and lower lids and any wrinkling, particularly at rest
- Orbital asymmetries (dystopia)
- Asymmetries of brow height (brow ptosis – if present will need to be corrected prior to upper lid blepharoplasty, as otherwise will get more noticeable brow ptosis post blepharoplasty)
- Presence of lagophthalmos (inability to close eyes) – if present pre-op, this is an absolute contraindication to aesthetic blepharoplasty
- Position of upper lid (supratarsal) skin crease and any asymmetries between both eyes
- Position of medial and lateral canthi relative to each other
- Any ectropion or entropion
- Any scleral show
- Relationship of globe of eye to orbital margin (vector) – less complications with +ve:  
     Negative vector: eye protruding beyond inferior orbital margin  
     Positive vector: eye protected by lying behind inferior orbital margin

### *Feel/move/measure*

Examine for brow ptosis, i.e., measure the distance between the mid-pupil and brow apex with callipers: on average is approximately 2.5 cm in adult female. Measure distance from brow apex to anterior frontal hairline: on average is 4.5–6 cm. Thus – if mid-pupil to brow apex height is <2.5 cm and brow apex to hairline height is >6 cm, then you have brow ptosis.

- Check for compensatory brow ptosis, i.e., the brow rises and falls as you open and close the eye.
- Assess for upper lid ptosis: Need to measure MRD1 and MRD2 (marginal reflex distance) and levator function:  
MRD1=distance from mid-pupillary point to upper lid margin (normal=5 mm)  
MRD2=distance from mid-pupillary point to lower lid margin (normal=5 mm)

Measure levator function (Normal=15–18 mm)

Subsequent surgical treatment of ptosis depends on amount of ptosis (mild, 1–2 mm; moderate, 2–3 mm; severe, 4 mm or more) and levator function (good if >10 mm and poor if <10 mm).

Assess lower lid laxity and lateral canthal tension using snap test: any delay indicates lack of lower lid support (mandating a transcanthal canthopexy or perhaps canthoplasty).

Location and size of fat pads and degree of prolapse is assessed in both upper and lower lids, simply by gentle pressure on the globe itself.

Assess for presence of Bell's phenomenon, i.e., upward movement of globe on eyelid closure. As absence of Bell's will increase the risk of corneal exposure post-op, particularly if there is any degree of lagophthalmos.

*AIM: By the end of the exam*

1. Identified any previous unknown eyelid pathology which may require investigation/treatment
2. Determined from ophthalmology report the pre-op status of visual fields and visual acuity
3. Assessed for brow ptosis and compensated brow ptosis
4. Assessed for upper lid ptosis
5. Determined lower lid laxity and lateral canthal tension
6. Confirmed presence of Bell's phenomenon
7. Have decided on most appropriate technique/combination of techniques
8. Have an idea of any problem areas patient wishes to address
9. Awareness of patients expectations about outcome

## Investigations

- Ophthalmologist assessment of visual fields and visual acuity
- If GA: Routine bloods: FBC, U + E's, Coagulation screen
- If GA and depending on co-morbidities, may also need chest X-ray, ECG etc.

## Treatment/Surgical Technique

Depends on examination findings and patient's expectations re outcome, downtime and willingness to accept risks/complications.

### *Upper lid blepharoplasty:*

Can be done under local (infiltration and eye drops) and sedation (much faster recovery and less expensive) or under GA.

Excise skin only first (pinch amount with Adson forceps), then excise partial upper strip of orbicularis (but full width strip laterally – as lateral orbicularis acts as depressor of brow).

Do not disrupt septum or take medial fat pad unless patient specifically requests (while initially looks good, this can hollow when patient ages and there is no way of correcting this).

### *Lower lid blepharoplasty:*

Can be done under local (infiltration and eye drops) and sedation (much faster recovery and less expensive) or under GA.

Always go for transconjunctival approach if possible as much better results (if experienced in the technique) and less complications than subciliary incision.

Transconjunctival: Be careful about removing too much fat. Patients should expect much more conjunctival oedema following this approach.

Transcutaneous/subciliary: Should always simultaneously perform a transcanthal canthopexy to prevent ectropion in immediate post-op period.

## Risks/Complications

### General

- If under GA include DVT/PE/chest infection

### Specific to eye

- Retro-orbital haematoma (rare: approximately 1 in 40,000 if untreated can cause blindness)
- Ectropion, i.e., resulting from overcorrection with lower lid blepharoplasty (avoid by taking minimal amount of lower lid skin and always performing transcanthal canthopexy)
- Excessive scleral show (again avoid in same way as for ectropion)
- Over-correction with upper lid blepharoplasty resulting in lagophthalmos (always store the excised skin, but be aware of Human Tissue Act in this regard)
- Under-correction with upper lid blepharoplasty with residual hooding
- Under-correction with lower lid blepharoplasty fat excision with residual prominent ‘bags’
- Corneal abrasions (treat with contact lens dressing for 5–7 days)

## Post-operative Management

- If done under local and sedation, then can go home same day
- Avoid any strenuous activity, heavy lifting, sports for minimum of 2 weeks
- Downtime: can be back at sedentary occupation after 2 weeks
- Sutures out at 5 days
- Warn about appearance of elevated lateral canthus if transcanthal canthopexy performed along with lower lid blepharoplasty
- Counsel about duration of 12–18 months for scar maturation

## Anatomy of the Lids (*Fig. 2.2*)

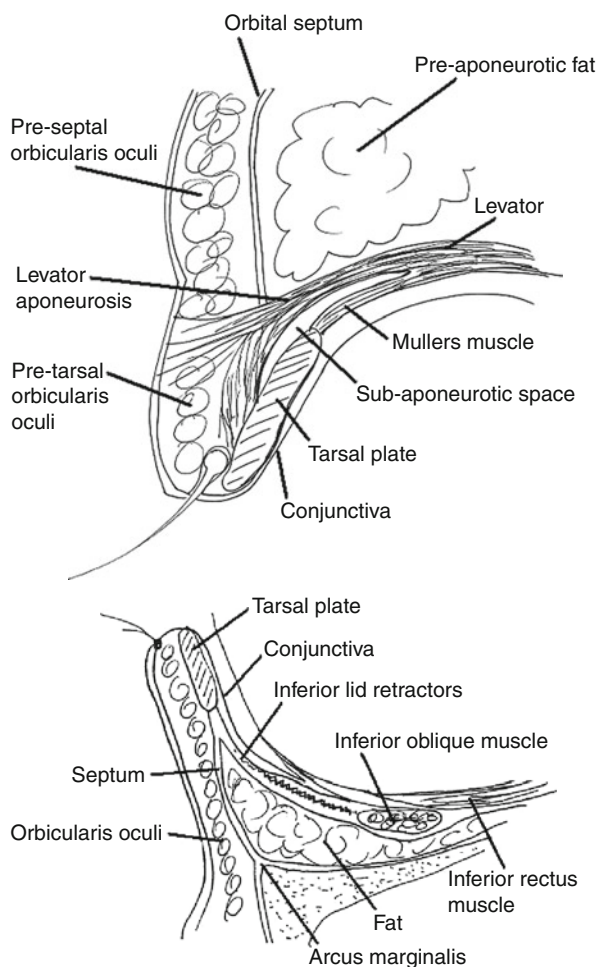


FIGURE 2.2 *Top*: upper lid anatomy, *Bottom*: lower lid anatomy



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