Ptosis Surgery – ‘You can do it’

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Disclosure Information

• I have no financial relationships to disclose

Objectives

• To highlight the important anatomical differences between the Caucasian and Asian eyelids

• To describe a simple and easily learned ptosis correction procedure that consistently produces excellent results in any type of eyelid
## Classification of Ptosis

<table>
<thead>
<tr>
<th>Amount</th>
<th>mm of droop</th>
<th>MRD1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>&lt;2mm</td>
<td>3</td>
</tr>
<tr>
<td>Moderate</td>
<td>3mm</td>
<td>2</td>
</tr>
<tr>
<td>Severe</td>
<td>&gt;4mm</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

## MRD1

![MRD1 Diagram](image)

## PMD

![PMD Image](image)
### Classification of Levator Function

<table>
<thead>
<tr>
<th>Levator Function</th>
<th>Lid excursion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>&gt;13mm</td>
</tr>
<tr>
<td>Good</td>
<td>8-12mm</td>
</tr>
<tr>
<td>Fair</td>
<td>5-7mm</td>
</tr>
<tr>
<td>Poor</td>
<td>&lt;4mm</td>
</tr>
</tbody>
</table>

### Measuring Levator Function

![Measurement Image]

### Phenyleprine Response

![Phenyleprine Image]
Procedure selection

<table>
<thead>
<tr>
<th>Response to phenylephrine</th>
<th>Surgical procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good (MRD1 = 4-5)</td>
<td>CMR</td>
</tr>
<tr>
<td>Moderate (MRD1 = 3)</td>
<td>&gt; maximal CMR</td>
</tr>
<tr>
<td>Poor (MRD1 = &lt;2)</td>
<td>Levator/Frontalis surgery</td>
</tr>
</tbody>
</table>

Rule of thumb

<table>
<thead>
<tr>
<th>Amount of resection</th>
<th>Elevation obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>8mm</td>
<td>2mm</td>
</tr>
<tr>
<td>6mm</td>
<td>1.5mm</td>
</tr>
<tr>
<td>4mm</td>
<td>1.0mm</td>
</tr>
<tr>
<td>?? &gt; 8mm</td>
<td>&gt; 2mm</td>
</tr>
<tr>
<td>??&lt; 4mm</td>
<td>&lt; 1mm</td>
</tr>
</tbody>
</table>
Sutures

Supraorbital nerve block

LA bleb to upper eyelid
Post injection of LA

Placement of traction suture

Evert eyelid over Desmarre’s
Evert eyelid over Desmarre’s

Marking the Tarsal edge

Marking the Conjunctiva
Marking the Conjunctiva

Marking the Conjunctiva

Placing suture through conjunctiva
Aligning the three sutures

Tying the three sutures together

Tying the three sutures together
Traction - Counter traction

Traction - Counter traction

Double fold of Conjunctiva
Double fold of Conjunctiva

Applying Puttermann Clamp

Applying Puttermann Clamp
Placing the catgut suture
Excising the double fold

Conjunctival fold excised

Locking forceps applied
Cut conjunctival margins sutured

Cut conjunctival margins sutured

Finishing the suturing
Completion of the procedure

Bilateral Ptosis
Post Neosynephrine

Bilateral CMR 10 mm

Right ptosis
Neosynephrine effect

Post op right CMR

Bilateral Ptosis
Post Neosynephrine

Bilateral CMR 10mm

Right Ptosis
Post Neosynephrine

Right CMR 8 mm

Bilateral Ptosis
Left CMR 6 mm

Right Ptosis

Horner’s
Complications

• Few
  — During procedure
    • Hematoma, ocular penetration, superior rectus injury, slipped suture
  — Immediate post op
    • Corneal abrasion, Pain, Ecchymoses
  — Late
    • Inadequate elevation
    • Suture Granuloma

I have not seen

• Lagophthalmos
• Over correction
• Contour abnormalities

Corneal abrasion
Question # 1

- Eyelid elevation is mostly done by
  A. Levator Superioris muscle
  B. Muller’s muscle
  C. Frontalis muscle
Question # 2

• Sympathetically innervated muscle is
  A. Levator Superioris
  B. Muller’s muscle
  C. Frontalis muscle

Question # 3

• Contra indication to Phenylephrine use in the eye is
  A. Open angle Glaucoma
  B. Narrow angle Glaucoma
  C. Any kind of Glaucoma
Question # 4

- Patient with a ‘recent onset’, unilateral, small ptosis, one should check

A. Ocular motility
B. Pupil size asymmetry
C. All of the above