Management of Ptosis in OPMD

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“OCULO” pharyngeal

The “EYE” part includes progressive weakness of the muscle that lifts the eyelid, and sometimes the muscles that move the eyeball around
Types of Ptosis

**Myogenic** = muscle weakness

**Levator dehiscence** = muscle lengthening

Photo courtesy of A. Joshi, MD
Myogenic Ptosis

Muscles and Ligaments of the Eye

- levator palpebrae superior m.
- superior rectus m.
- inferior rectus m.
- inferior oblique m.
- superior transverse (Whitnall’s) ligament
- Muller’s muscle
- levator aponeurosis
- inferior tarsal m.
- capsulopalpebral fascia
- orbital septum
Ptosis in OPMD

- Usually starts in 50’s
- 99% of patients have ptosis by age 70
- Ptosis is often the first symptom of OPMD (Becher et al)
  - 93% of cases ptosis was noted before dysphagia
  - 43% at the same time
  - 14% dysphagia was noted before ptosis
Symptoms of Ptosis in OPMD

- Trouble seeing especially superior visual field
- Neck pain from chin up position
- “Bedroom Eyes” - Looking or feeling tired or drunk
Ptosis Measurements

Marginal reflex distance
Levator function
Interpalpebral distance

Photo courtesy A. Joshi, MD
Measurements – Levator Function
Clinical Findings

<table>
<thead>
<tr>
<th>OPMD</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRD – decreased</td>
<td>MRD – decreased</td>
</tr>
<tr>
<td>IPD – decreased</td>
<td>IPD – decreased</td>
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<tr>
<td>LF – decreased, variable</td>
<td>LF - normal</td>
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</table>
Impact of Ptosis in OPMD

- Trouble with driving, reading, watching television, working, and other activities of daily living
- Psychological impact/appearance
- Neck strain
- Gradually progresses and many patients require surgery
Goals of Treatment

Improve visual function
Decrease neck strain
Lessen psychological impact
Treatment Options

Blepharoplasty
Muller Muscle Resection
Levator Advancement
Frontalis Sling
Question

- Does it matter whether you use a plastic surgeon or is an oculoplastic surgeon a preferred choice?
Choosing a Surgeon

**Plastic Surgeon**
- Two to three years of concentrated plastic surgery training
- Part of the 5 year general surgery residency
- May have additional or specialized training in eyelid surgery

**Oculoplastic Surgeon**
- One to two year fellowship in plastic surgery surrounding the eye
- In addition to a three year residency in Ophthalmology
- May have more expertise in managing dry eye after surgery
Blepharoplasty

- Removal of excessive skin +/- fat and orbicularis muscle from the upper eyelids
- Does NOT address the weakness of the muscle in OPMD
- Can be used in conjunction with LA or FS

Image from blog.abcmedicaltourism.com
Muller Muscle Resection

- Usually reserved for mild ptosis with good levator function
- Muller’s muscle is not affected in OPMD
- Can lift lid about 2mm
Question

- My eye surgeon will not perform the Muller’s treatment because she does not feel it is effective or wise living in an extremely dry climate. Is her conclusion valid?
Answer

- Ptosis treatment is dependent upon the specifics of each individual case
- MMCR is not as effective as other OPMD treatments
- Any surgery is a risk for dry eye (esp in a dry climate)
Levator Advancement

- Surgical shortening of the levator muscle and aponeurosis
- Can be useful early in disease when levator function is greater than 7-8mm.

Image from hanbit-eye.co.kr
Question

- If you have had the levator procedure one time and need your lids lifted again, is the levator procedure a viable option the second time or is a Frontalis sling the best resort?
Answer

- Likely if the levator advancement failed the first time, frontalis sling is a better option to address the underlying issue.
- Each reoperation is more difficult due to scarring, increased bleeding, and loss of tissue.
Frontalis Sling

- A direct connection between the forehead muscle and the eyelid
- Bypasses the weak muscle affected by OPMD
- Most cases under local anesthesia

Image from FCI Ophthalmics
Question

- Can your eyelids still continue to droop after having a sling put in if the muscles are extremely weak. Also, can this procedure cause any vision changes?
After frontalis slings, many patients need adjustments for correct eyelid height

A weak levator muscle should not affect sling function, as the frontalis muscle is now acting to lift the eyelids

Eyelid surgery rarely causes vision loss to retrobulbar hemorrhage

Dry eye can cause vision changes
Allen et al.

- Percentage of New Mexican patients with OPMD who needed more than one surgery to improve their eyelid function
  - 93.3% if initial surgery was blepharoplasty
  - 47.1% if initial surgery was levator advancement
  - 7.8% if frontalis sling was initial surgery

Conclusion: Frontalis sling is a GOOD option for the first (and possibly only) surgery in OPMD
Surgical Outcomes – Frontalis Sling

Before

After
Surgical Outcomes – Frontalis Sling
One Week Post op (Dr. Joshi)
Complications of Surgery

- Dry Eye/Exposure
- Corneal Infection
- Need for adjustment/more surgery
- Rare: retrobulbar hemorrhage
Question

- If an eye is over-corrected and severe cornea issues result, what, if anything, can be done? Is punctal cauterization a safe solution since it is irreversible?
Answer – Dry Eye Treatment

- Lubrication
  - Artificial tears up to every hour during the day
  - Ointment at night
- Massage
- Punctal plugs
- Adjustment of slings
- Punctal cauterity
- Tarsorrhaphy
QUESTIONS?
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THANK YOU!!
References


