SURGICAL MANAGEMENT OF BLEPHAROSPASM

Ann P. Murchison, MD, MPH
Associate Surgeon
Oculoplastic and Orbital Surgery Service
Wills Eye Hospital, Philadelphia
Disclosure Information

- In the past 12 months, I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this activity.

- I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.
OVERVIEW

• Review of anatomy.
• Related clinical problems.
• Surgical options.
• Results and risks.
BASIC EYELID ANATOMY

• Eyelid opening and closure depends on two sets of “antagonist” muscles.

• Eyelid CLOSERS:
  • Orbicularis oculi.

• Eyelid OPENERS:
  • Levator palpebralis superioris.
ORBICULARIS

BLINK

WINK

ORBITAL ORBICULARIS
SECONDARY “CLOSERS”

PROCERUS
SECONDARY "OPENERS"

- Frontalis (brow) muscle.
- Müller's muscle.

**FRONTALIS**

**MÜLLER’S MUSCLE**
FACIAL NERVE

- Controls movement of facial muscles.
- Damage results in facial weakness to one side of the face.
- Bell’s palsy.
MYECTOMY

- Removal of orbicularis through a skin incision.
- “Anderson procedure”: Extirpation of entire orbicularis, corrugator, procerus.
- “Limited myectomy”: Extirpation of portion of orbicularis.
FACIAL NERVE SURGERY

• Full neurectomy.
  • Facial nerve is cut and avulsed at its main trunk.
  • Results in hemifacial (half-face) paralysis.

• Limited neurectomy
  • Botulinum toxin is a variant: “chemodenervation”.
  • Concentrated on zygomatic and buccal branches.
SURGERY FOR HEMIFACIAL SPASM

- Microvascular decompression (MVD).
  - Also called Janetta procedure.
  - General anesthesia.
  - Reposition artery off nerve and place cushion between them.
  - 85% good long term outcome.
  - Small recurrence rate, 2% per year.

Nashvillehemifacialsprasm.com
SECONDARY PROBLEMS

- Brow ptosis = droopy forehead.
- Dermatochalasis = overhanging skin.
- Ptosis = droopy lid from stretched out levator.
SECONDARY PROBLEMS

DERMATOCHALASIS

PTOSIS
DERMATOCHALASIS

PTOSIS
SECONDARY SURGERY

- For dermatochalasis: Upper eyelid blepharoplasty.
  - Removal of excess skin and fat.
- For ptosis: External levator resection.
  - Tightening of levator muscle.
  - More difficult to perform.
  - May require postoperative readjustments.
- Either surgery may exacerbate lagophthalmos and corneal exposure.
UPPER LID BLEPHAROPLASTY
EXTERNAL LEVATOR RESECTION
SECONDARY SURGERY

- Brow ptosis: Droopy brows from chronic stretching of frontalis muscle.
- Multiple techniques for repair, depending on patient findings and surgeon preference.
BROW LIFT
RISKS

• ALL surgical procedures have risks and can occur in anyone!

• MYECTOMY
  • Lagophthalmos: 19%
  • Hematoma: 2%
  • Skin necrosis: 2%
  • Ectropion
  • Supraorbital hypesthesia (forehead numbness)
  • Lymphedema (prolonged lid/facial swelling).
HEMATOMA
(BLEEDING)

SKIN
NECROSIS
SUPRAORBITAL HYPESTHESIA (FOREHEAD NUMBNESS)

LYMPHEDEMA
RESULTS

• After myectomy, the recurrence of BEB occurred in about 46-59% of patients over 5 years. Many of these cases recurred in the lower eyelids.

• Many patients were controlled with additional botulinum toxin, usually at a lower dose than initially required.
  • Injections may be more painful.

• 94% of patients stated that myectomy provided both short and long term benefits.
RESULTS

• Severe cases of BEB benefited more than mild or moderate cases.
• Limited myectomy provided more long-term relief than facial nerve avulsion.
SUMMARY

• Limited myectomy is reserved for patients with severe BEB who have failed botulinum toxin therapy.
• Surgery may have to be staged.
• Botulinum toxin may be needed after myectomy or neurectomy.
• All surgery carries risks.