

## Outcomes of Mild to Moderate Upper Eyelid Ptosis Correction Using Müller's Muscle-Conjunctival Resection

Mengyuan T. Liu, BS; Ali Totonchi, MD; Kris Katira, MD; Justin Daggett, MD; Bahman Guyuron, MD

**Background:** Müller's muscle-conjunctival resection (MMCR) is a technique used for correction of mild to moderate ptosis. This study was designed to examine the efficacy of the senior author's MMCR technique and analyze variables that potentially affect outcomes of the surgery.

**Methods:** Patients with  $\geq 10$ -month follow-up were included. The amount of ptosis reduction, symmetry of eyelids, effects of concomitant facial aesthetic surgeries, and adverse outcomes were analyzed. Furthermore, patients were grouped into short-term follow-up ( $< 24$  months after surgery) and long-term follow-up ( $> 24$  months) cohorts to determine if the outcomes of MMCR changed over time.

**Results:** Forty patients with mean follow-up of 28 months combined for a total of 70 MMCR surgeries. MMCR significantly reduced ptosis by a mean  $1.48\text{mm} \pm 0.88\text{mm}$  ( $p < 0.001$ ), corresponding to  $0.19\text{mm}$  of eyelid elevation for every  $1.0\text{mm}$  of Müller's muscle resected. MMCR successfully corrected 84% of eyelids to within  $0.5\text{mm}$ , and 94% to within  $1.0\text{mm}$  of normal eyelid position. MMCR significantly improved eyelid symmetry to within  $0.5\text{mm}$  from 53% of patients before surgery to 75% of patients after ( $p = 0.036$ ). Furthermore, the mean correction of ptosis was not significantly different between short-term ( $1.58\text{mm} \pm 0.93\text{mm}$ ) and long-term ( $1.32\text{mm} \pm 0.93\text{mm}$ ) follow-up patients ( $p = 0.258$ ). Lastly, concomitant surgeries such as upper and lower blepharoplasty, rhytidectomy, and endoscopic forehead rejuvenation with corrugator supercilii resection did not significantly affect ptosis correction by MMCR ( $p > 0.05$ ).



Figure 1. Patient underwent bilateral 8mm of Müller's muscle-conjunctival resection and upper blepharoplasty. (Top) Preoperative photo. Patient had 3.5mm (L) and 3.6mm (R) upper eyelid overlap before surgery. (Bottom) Postoperative photo. Patient had symmetrical 2.0mm bilateral upper eyelid overlap after surgery.

**Conclusions:** Müller's muscle-conjunctival resection is an effective long-term solution to mild to moderate eyelid ptosis and asymmetry, and can be effectively performed concomitantly with other facial aesthetic procedures.

### Disclosure/Financial Support

The authors have no financial interest to declare in relation to the content of this paper.