

Lower eyelid retraction: treatment options

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The article "Cheeklift with and without posterior lamellar spacer grafts for the treatment of lower eyelid retraction" by Campa et al., published in *Aesthetic Plastic Surgery* in 2024, addresses significant aspects of managing lower eyelid retraction.

Lower eyelid retraction is a common condition characterized by the inferior displacement of the lower eyelid, which exposes the sclera between the limbus and the eyelid margin. This malposition may or may not involve lateral canthal tendon laxity. Symptoms can range from mild irritation to severe, vision-threatening corneal exposure and decompensation. Lid retraction can be classified as mild, moderate, or severe. The Campa's et al. study analyzed various causes of lower eyelid retraction, including postblepharoplasty complications, thyroid eye disease, trauma, congenital anomalies, and age-related changes, which influenced the outcomes.

Treatment strategies must be based on the affected eyelid lamellae, symptom severity, and degree of eyelid displacement. Management can be clinical supportive (e.g., lubrication), non-surgical interventions (e.g., hyaluronic acid filler injections), or surgical treatment. Surgical options encompass tarsorrhaphy, anterior lamellar skin grafting, lower eyelid retractor disinsertion, and midface lifting with or without spacer grafts.

Spacer grafts are employed to enhance the vertical dimension of the middle and posterior lamellae, particularly in cases involving a "negative vector". Various materials have been proposed for spacer

grafts, including tarsoconjunctiva, sclera, hard palate, cartilage, buccal membrane, fascia, synthetic devices, and bioengineered acellular dermal matrix. In the study, the authors employed retractor muscle disinsertion, canthal techniques, and subperiosteal midface lifts, with or without spacer grafts made from hard palate tissue or AlloDerm (LifeCell Corporation, The Woodlands, Texas). Pre- and postoperative measurements of MRD₂ (marginal reflex distance from the pupil center to the lower lid margin) and lateral lower limbus-to-lid margin distance were analyzed using Epic EMR software. Clinical outcomes were assessed based on improvements in MRD₂, clinical signs, and postoperative complications.

The authors reported their surgical technique: a transconjunctival and subperiosteal cheek lift was performed following lateral canthotomy and cantholysis. The conjunctiva and lower eyelid retractors were incised just inferior to the inferior tarsal border across the entire lower eyelid. Dissection continued in the subperiosteal space, with the periosteum incised inferiorly to achieve wide mobility of the cheek. The myocutaneous flap and the AlloDerm graft were sutured to the inferior tarsal border using running 6-0 plain gut sutures, with the inferior border of the graft secured to the superior edge of the free conjunctiva. In cases requiring only retractor disinsertion, this procedure was performed at the lower part of the tarsus. A Frost suture was applied in all cases for at least 1 week.

Comparable degrees of MRD₂ elevation and complication rates were observed across all techniques. However, cases involving spacer grafts demonstrated higher reoperation rates, likely due to the severity of the underlying condition. Midface lifting and retractor disinsertion or canthoplasty were effective in recruiting anterior lamella tissues, thereby improving MRD₂. These techniques focus on repositioning the eyelid retractors and lengthening the posterior lamella. The addition of

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posterior lamellar grafts to midface lifts did not appear to significantly enhance outcomes in terms of elevating the lower eyelid margin against the cornea. The authors concluded that midface lifting alone is as effective as

techniques involving grafts for elevating the lower eyelids. They emphasized the importance of individualized treatment plans based on the anatomical defect of the lower eyelid.