

Operative Technique

Primary Double Eyelid Surgery—Trapezoidal Debulking of Upper Eyelid Tissues

William P. D. Chen, MD

Abstract: The video illustrates the steps of Asian blepharoplasty of the upper eyelids, using the author's principle of beveled approach and trapezoidal debulking of preaponeurotic platform to allow safe access, minimization of wound injury, and creating a physiologically dynamic crease, without resorting to the use of buried sutures.

INDICATIONS

Some “single” eyelid individuals are born without a noticeable upper eyelid crease, due to insufficient terminal interdigitations of levator aponeurotic fibers toward the pretarsal orbicularis oculi intermuscular septa, or toward skin lying along the superior tarsal border.^{1,2} One may observe a lower point of fusion of orbital septum with the levator, a greater amount of preaponeurotic fat in the lower zone of the levator, and an eyelid fold that may rest partly on the eyelashes. The author's beveled approach allows precise handling of redundant soft tissues and defining the preferred height and shape of crease appropriate for Asian double eyelid surgery.

APPROACH

External Incision

Beveled approach and trapezoidal debulking of preaponeurotic tissues.^{3,4}

Preoperative Discussion and Preparations

Reconfirm preferred crease *height* (usually 7.0 ± 0.5 mm) and *shape* (parallel or nasally tapered).

Local premedication may include oral diazepam and analgesic given an hour before. Topical anesthetic eye drop (proparacaine) is instilled, and 1 ml or less of 2% xylocaine (with 1:100,000 dilution of epinephrine) is injected subcutaneously. Corneal protector is applied.

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Video Graphic 1. See video, Supplemental Digital Content 1, which illustrates a primary Asian upper blepharoplasty as performed for a female adult, who preferred a crease with medium height and parallel shape. This video is available in the “Related Videos” section of the Full-Text article or at <http://links.lww.com/PRSGO/A777>. Trapezoidal approach and clearance of preaponeurotic platform in Asian upper blepharoplasty. The solid line drawn on skin along the upper tarsal border is the eyelid crease incision (lower incision line). The upwardly beveled arrows show several possible trans-orbicularis oculi passages to reach the preaponeurotic space. Usually 2–3 mm of skin includes for excision. The upper wound edge (preseptal skin-orbicularis flap) folds down easily without tension. C, conjunctiva; M: Mueller's muscle; L, Levator aponeurosis.⁴

STEPS

See video, Supplemental Digital Content 1, which illustrates a primary Asian upper blepharoplasty as performed for a female adult, who preferred a crease with medium height and parallel shape. This video is available in the “Related Videos” section of the Full-Text article or at <http://links.lww.com/PRSGO/A777>.

1. Marking—The upper tarsus's central height is measured and transposed to the skin side as the eyelid crease line (lower incision line). The upper incision line typically includes 1.5–2.5 mm of skin.
2. Incision is made using #15 blade along the lower line, followed by the upper line. The depth is just beyond the dermis to orbicularis oculi. Bleeding is controlled using a bipolar cautery.

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3. A bovie needle tip is used to gently traverse through orbicularis along the upper incision until part of the septum is opened. (PEARL: *The beveled approach allows more of the posterior fibers of the orbicularis above the upper incision to be thinned, and distributes the surgical plane over a wider area rather than just along one incisional depth.*)
4. Westcott scissors is used to open the septum transversely; with protruding preaponeurotic fat, partial reduction of fat is performed to a point which allows natural crease indentation without placement of any closing sutures, nor use of any buried sutures.⁵
5. The strip of skin–orbicularis that is hinged along the superior tarsal border may be excised using bovie cautery.
6. Further thinning of lower wound edge’s orbicularis and clearance of fibro-adipose tissues may be performed to facilitate construction of the crease.
7. It is important to release any constraining drapes and allow the forehead and preseptal layers to reset against a freely mobile posterior lamella of levator, Mueller’s muscle and tarsus. (PEARL: *It prevents postoperative lagophthalmos and inadvertent placement of high crease.*)
8. Crease construction: 6-0 silk is used to pass through the lower skin edge, picking up some aponeurotic fibers just above the superior tarsal border, and then to the upper skin edge, tying them as 6–7 interrupted sutures. 7-0 Suture is applied skin-to-skin in between those single sutures. They are removed after 1 week.

The beveled approach has the following advantages:

1. *The wound injury is distributed over a wider area.*
2. *Redundant soft tissues are removed as a trapezoidal block. There are less steps and potential for bleeders. It allows safe access to the preaponeurotic space.*
3. *The upper incision edge skin-muscle layer can be closed with minimal tension to give a natural dynamic crease without the use of permanent anchoring sutures.*

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