Transconjunctival Upper Lid Blepharoplasty

This technique, which targets excess ocular fat in the medial pocket, may be used as a primary procedure or as a secondary revision in patients who are unhappy with remaining excess medial fat after undergoing blepharoplasty. According to the author, the procedure is fast and relatively easy to perform, and patients benefit from rapid recovery, minimal morbidity, the use of local anesthesia, and the absence of scarring. (Aesthetic Surg J 2005;25:292-300.)

The transconjunctival upper lid blepharoplasty technique is designed to address the needs of patients whose periorbital aesthetic problem is limited to excess fat in the medial pocket of the upper eyelid. This includes patients who have had no previous blepharoplasty procedure or those undergoing secondary revision to correct excess medial fat.

Compared with transconjunctival lower lid blepharoplasty, transconjunctival upper lid blepharoplasty is relatively new. Transconjunctival lower lid blepharoplasty, first described in 1928, gained tremendous popularity in the 1980s because it significantly reduced the risk of lid retraction associated with the traditional skin/muscle approach. My associate and I reported on our transconjunctival upper lid blepharoplasty technique in 1999.

The approach is ideal because it is fast, relatively easy, and can be performed under local anesthesia with rapid recovery and minimal morbidity. Other benefits of this procedure are reduced complications and elimination of scarring in the upper eyelid.

**Pertinent Anatomy**

In the upper eyelid, the medial pocket is the only fat compartment that herniates (Figure 1). The lateral pocket cannot herniate or be exposed through the conjunctiva. It is anatomically retained by a sling formed by the fusion of the levator aponeurosis, orbital septum, and fascia on the posterior aspect of the orbicularis oculi muscle (Figure 2). This fusion of structures creates a sling that is low laterally and much higher medially (Figure 3).

What is clinically most significant is that the levator aponeurosis, with its medial horn higher than the lateral horn, allows transconjunctival access to the medial fat pocket (but not the lateral pocket) without risk of injuring the aponeurosis (Figure 4). The lowest part of the medial fat pocket lies medial to and below the medial horn of the levator aponeurosis, while the lateral fat pad lies anterior to the levator and cannot be accessed through the conjunctiva without injury to the levator aponeurosis (Figure 5).

**Patient Selection**

The ideal candidate for this approach has excess ocular fat limited to the medial pocket, and minimal or no excess upper lid skin (such as patients who have already undergone blepharoplasty). As a primary procedure, transconjunctival upper lid blepharoplasty may be combined with a brow lift and/or skin resurfacing for management of minimal excess upper lid skin.

**Operative Procedure**

The procedure may be performed under local or general anesthesia. If additional major facial rejuvenation procedures are planned, I prefer general anesthesia, but if eyelid revision is the sole procedure, then local anesthesia is sufficient. When using local anesthesia, I instill 2 drops
Figure 1. Periorbital fat herniation limited to the medial pocket may be seen in this 62-year-old woman. Although she has excess fat in the lateral compartment, it does not herniate.

Figure 2. This cross-sectional view of the periorbital area demonstrates how the levator aponeurosis retains the lateral fat compartment.
**Operative Strategies**

**Figure 3.** The levator aponeurosis has a low-lying lateral horn and a much higher medial horn.

**Figure 4.** Relationship of the medial and central fat pads to the levator aponeurosis and its medial and lateral horns. The arrow demonstrates the transconjunctival access to the medial fat pocket.
of tetracaine on the eye, place the corneal protector, and infiltrate the local anesthetic, 0.5% lidocaine with epinephrine 1:200,000, through the skin and conjunctiva. When using general anesthesia, I use lidocaine and epinephrine for the vasoconstrictive effect, but not the tetracaine.

**Incision**

Instruct your assistant to use a Blair retractor to pull the medial part of the upper eyelid upwards to expose the “bare area” described by Guerra et al. In this bare area, the conjunctiva is below the medial horn of the levator aponeurosis; the medial fat is just deep to the conjunctiva. By applying gentle pressure on the globe, the fat can be easily seen as a bulge through the conjunctiva.

Then, make a short 5-mm incision in the conjunctiva with the cutting current and a Colorado needle tip cautery. Keep the incision medial, because any lateral extension may injure the levator aponeurosis (Figure 6). Application of gentle pressure behind the retractor is a useful maneuver that will expose the medial border of the tarsal plate through the conjunctiva. If the incision is kept medial to this border, you will eliminate the risk of injury to the levator aponeurosis.

**Fat Dissection and Resection**

Once the incision is made, it is easy to identify the medial fat and gently tease it out into the wound (Figure 7). Resect the excess fat with the coagulating current in a graduated manner, judging the endpoint by gently pressing on the globe while looking for medial bulging through the skin (Figure 8, AB). I do not close the conjunctival incision (Figure 8, C). I have found that it heals rapidly, and I have not seen any wound-related problems (Figures 9 and 10).

**Conclusions**

This technique is not only simple and effective, but also safe. I have not seen any ptosis as a result of the procedure, nor have I seen any granulomata of the conjunctiva where the incision is made. When used as an isolated procedure, transconjunctival upper lid blepharoplasty is
Figure 6. Transconjunctival access incision.
Figure 7. Delivery of medial fat through the transconjunctival incision.
Figure 8. A, B, Graduated resection of fat with the coagulating current. A, C, The access incision following the resection of the fat.
Figure 9. A, Preoperative view of a 54-year-old woman. B, Postoperative view following transconjunctival removal of fat from the upper eyelids on both sides demonstrates improvement of the upper eyelid contour. She also underwent bilateral secondary lower lid blepharoplasty with orbicularis redraping. C, This split-face view demonstrates the improvement of the upper and lower lids.
limited to the removal of excess fat from the medial pocket, but a combination of this approach with a brow lift or resurfacing of the upper eyelid skin expands its role in periorbital rejuvenation.

References


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