



Invited Discussion on: Orbicularis–White Line Fixation in Asian Blepharoplasty—Kiss Technique

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Introduction

This is an interesting article on a surgical technique for Asian upper eyelid blepharoplasty. The authors' technique leaves the orbital septum intact, mobilizing the inferior flap in the retro-orbicularis oculi plane, lifting the pretarsal orbicularis oculi off the anterior tarsus and fixating the pretarsal orbicularis oculi to the lower edge of the levator aponeurosis at the fusion point of the levator with the orbital septum. This conjoined area has a distinct whitish appearance and accordingly is called the 'white line.' The key difference with the incision Asian upper blepharoplasty used by most surgeons is that the orbital septum was left intact. The authors reasoned that because the technique involves lesser extent of dissection by sparing the orbital septum, recovery is quicker, and the incision faded well and yet fixation provided is robust enough to have no incidences of crease loss in the long term in their patients.

As the authors noted, the non-incision method is advantageous for its simplicity and quicker recovery. Its limitations are that rate of loss of the crease or recurrence in the short term is relatively higher and the longevity of the crease thus created may be shorter as the excess skin and loosening of the fixation around the suture develops over time. Perhaps as importantly as well, non-incisional methods have very limited versatility in managing skin excess and to more precisely contour the upper eyelid crease. This technique is also unable to address the puffiness of the upper eyelids common in Asian eyelids. The alternative approach, the open method has the advantage of greater versatility in contouring the crease that was desired, in addressing skin excess and elimination of puffiness of the upper eyelids. The recurrence rate is much lower and the longevity is also much better. The disadvantage is the significantly more prolonged swelling and edema that the incision method would involve. Furthermore, in Asian upper eyelids, swelling tends to be more significant and more prolonged compared to Caucasian upper eyelids.

The swelling associated with upper eyelid surgery is associated with the extent of the dissection. The more aggressive the dissection, the greater the surgical trauma associated with the surgery and perhaps the more extensive the disruption in the upper eyelid lymphatics, the greater and more prolonged the swelling [1, 2]. Conceptually then, if the same effect may be achieved with less extent of surgical dissection, the technique with the lesser dissection is the preferred and indeed the superior technique.

With the incision upper blepharoplasty approach, opening the orbital septum is a key step with many surgical techniques that have been described. Opening the orbital septum as a surgical step was performed for a few notable reasons. First is to remove the excess upper eyelid

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fat pads, particularly the lateral fat pad. This is to address the upper eyelid puffiness that many patients present with. Second is opening the orbital septum allows for precise identification of the lower edge of the levator aponeurosis and/or the fusion area of the orbital septum and the levator aponeurosis. The lower edge of the levator or the cut edge of the orbital septum is often used as a fixation point for crease creation, either into the dermis or the pretarsal orbicularis as used in this paper. Opening the orbital septum accordingly provides a distinct lower edge into which the upper eyelid crease may be securely fixated into. Thirdly, this maneuver is needed to access the retro-septal anatomy, that of the levator aponeurosis and Muller's muscle, for patients needing procedures such as levator advancement or plication for ptosis correction. This is significant as many Asian patients, even young patients, presenting for upper eyelid blepharoplasty may have various degrees of upper eyelid ptosis that if left untreated would have a suboptimal clinical outcome in the upper eyelid blepharoplasty.

The authors did not elaborate on the indications and contraindications for this procedure. From the reasoning presented above, any patient presenting with puffy upper eyelids needing fat excision, upper eyelid (clinical or subclinical) ptosis or requesting widening of the palpebral aperture would not be a candidate for the procedure. However, for patients presenting purely for crease creation (*without puffy upper eyelids and no upper eyelid ptosis*) this technique is a useful addition to the current surgical techniques. The upper eyelid crease achieved by using this technique is crisp with good longevity of the result as shown in the paper. As noted, if this may be achieved without opening the septum, this may be the preferred approach in this subgroup of patients.

The authors claim that swelling is less because of the preservation of the orbital septum and that recovery is quicker. Looking at the clinical photographs, it is difficult to establish that this was indeed the case as the extent of swelling seems no less than compared procedures that open the septum in the authors experience. The edema associated with lower eyelid surgery is often associated with the extent of the dissection, the more extensive the dissection, the greater and more prolonged is the edema from disruption of the lymphatics of the upper eyelid. In the upper eyelid, the areas that are most likely to induce more prolonged swelling when surgically manipulated are the areas above the superior and antero-superior part of the tarsus, where the lymphatics of the upper eyelid are located [1, 3]. Furthermore, the rich fine vascular arcade located above the tarsus is also prone to primary and secondary bleeding/hematomas. Because this technique requires the elevation of the pretarsal orbicularis off the anterior tarsus, this maneuver in our opinion may result in more swelling than

the benefit of septum sparing in their technique. Furthermore, in the patients presented, the post-operative photographs documented the interval at follow-up at 1 week and 6 months post-operatively. Perhaps presenting the level of swelling at the 2–8 weeks post-operative time frame would be able to be helpful in evaluating the recovery of their patients treated with this surgical technique.

That said, there are some potential benefits for the technique. The crease is potentially more dynamic, with a crisp crease when the eyes are opened and a faint scar when the eyes are closed. This is because the crease fixation suture is placed into the orbicularis oculi and not into the dermis. This produces enough tension on the skin such that when the eyes are opened, the crease is crisp, but when the eyes are close, it relaxes more than if direct dermal fixation was performed, facilitating fading of the scar in a shorter time. Secondly, the white line technique is a good area for deep fixation of the crease. The technical difficulty as the authors pointed out is the precise identification of this structure, which ultimately determines the result of the surgery. This is related to the anatomy of the Asian upper eyelid that is quite different from the Caucasian upper eyelids. The orbital septum is thicker and multi-lamellated; the fusion point of the orbital septum and levator is located lower at the upper anterior edge of the tarsus and the orbital septum (and orbital fat pads) tends to bulge forward over the low fusion point obscuring the lower edge of the levator aponeurosis. For these anatomical reasons, in Asian upper eyelids, locating and identifying the lower edge of the levator aponeurosis are more challenging. When the orbicularis has been cut, usually on the bulging of the lower part of the orbital septum is seen, covering over the lower edge of the levator aponeurosis located posterior to the septum. To locate the 'white line,' as shown in Figure 2 of the paper, downward traction on the pretarsal orbicularis oculi and tarsus and upward traction on the orbital septum would be needed and is a technical point to note to locate the 'white line.'

In conclusion, the authors are to be congratulated in developing this technique. It is a good technique in patients that are appropriately selected and in cases in which fat removal is not needed.

Compliance with Ethical Standards

Conflict of interest The authors declare no conflict of interest in this present work. None of the authors has a financial interest in any of the products, devices or drugs mentioned in this manuscript.

Ethical Statement This article does not contain any studies with human participants or animals performed by any of the authors.

Informed Consent For this type of study informed consent is not required.

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