Chopstick technique for nucleus removal in an impending dropped nucleus

We agree with Lal and coauthors1 that despite attempts to prevent posterior capsule tears and a dropped nucleus, they do occasionally occur. The authors report the use of a Sinskey hook introduced through the pars plana to support the hanging nucleus and remove it through an enlarged wound. Although the article is well written, we would like the authors to clarify some aspects of the technique.

Lal and coauthors introduced the hook through a temporal pars plana port to support an inferonasally unsupported nucleus in a case of clear corneal temporal phacoemulsification. We would like to know the preferred site of the pars plana port. Should it be to the left of the main wound, so the hook held in the left hand can be introduced easily and used to support the nucleus, or should it be guided by the position of the unsupported nucleus for optimal support?

The authors advise using the pars plana Sinskey hook with the tip up to support the nucleus. When held by the handle, the Sinskey hook points down. If one has to make the tip point up, the handle has to be upside down, as shown in Figure 1. This position can be cumbersome and might make it difficult to manipulate the nucleus, especially when operating in the right eye through a superior corneal tunnel. This problem can be overcome by using the pars plana Sinskey hook with the tip down to support the nucleus and the tip of a second Sinskey through the clear corneal incision to bury in the nucleus. Another option is to modify the Sinskey hook so the tip points up along with the handle. The same configuration and function can be achieved by modifying a 24- or 26-gauge ½-inch disposable needle mounted on a tuberculin syringe. The tip is sharp and can be easily buried in the nucleus. Care should be taken so the sharp tip does not damage intraocular structures.

We think this is a useful technique. With certain refinements, it can be made more useful for phacoemulsification surgeons, especially beginning surgeons.

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REFERENCE

Reply: We thank the authors for their interest in our article and would like to offer the following clarification regarding the site of the pars plana port for the introduction of the Sinskey hook. We prefer to introduce it from the temporal route as this provides the most working space and maximum maneuverability. This is especially true in deep-seated eyes. However, in the left eye, if the surgeon is sitting superiorly and is not comfortable with the left hand, he or she can use any site that is comfortable. We routinely use the temporal route in all cases. Use of the temporal route also takes care of the problem of the handle of Sinskey hook pointing down, as mentioned in your letter.

The suggestion of modifying the Sinskey hook to suit this purpose is a good one. The use of modified needles is more dangerous as these can cause injury. Also, in softer nuclei, the needles cut through and do not grip as well as the Sinskey hooks.

We appreciate the suggestions and modifications to our technique and hope that it can be of use to the beginning phacoemulsification surgeon.—Anita Sethi, MD, FRCS

Effect of brimonidine on pupil diameter

We read with interest the articles by Thordsen and coauthors1 and Kesler and coauthors2 regarding the effect of brimonidine tartrate on pupil diameter. Brimonidine is a selective α2 agonist, and stimulation of α2 receptors on presynaptic sympathetic nerve terminals decreases the production, storage, and release of norepinephrine. Unsurprisingly, brimonidine in both 0.2% and 0.15% concentrations will blunt the normal sympathetically mediated pupil dilation that occurs when environmental illumination is reduced.

Thordsen and coauthors and Kesler and coauthors propose that brimonidine may palliate low-light vision disturbances after refractive surgery in patients with effective optical zones smaller than their dark-adapted pupils. Thordsen and coauthors further suggest that the response to brimonidine could be incorporated into the preoperative assessment and consent process so individuals with large pupils could be informed that “they may require drops postoperatively to help minimize symptoms.”

Tonic reduction of norepinephrine levels in the synaptic junction leads to up-regulation of α2 receptors on the iris dilator muscle. In a study of 10 normal subjects, Brown and coauthors3 showed that once-daily dosing with brimonidine 0.15% initially blocked the pupil dark response, but this effect was blunted within

Figure 1. Sinskey hook in normal position with the handle in the normal position with the tip pointing down (top) and with the handle upside down with the tip pointing up (bottom).
5 to 11 days (tachyphylaxis); when the medication was discontinued, rebound mydriasis (dark-adapted pupil larger than at baseline) resulted when up-regulated α1 receptors were exposed to normal levels of norepinephrine (Figure 1). Tachyphylaxis was seen in 100% of subjects who showed an initial response. One of us (S.M.B.) performed the same trial on herself using brimonidine 0.2% and experienced tachyphylaxis within 3 days, followed by rebound mydriasis. Rebound mydriasis could be functionally devastating to refractive surgery patients who suffer from disruptive levels of glare disability.

Since brimonidine cannot be used chronically for the relief of low-light visual symptoms, its usefulness in the preoperative-assessment and informed-consent process for refractive surgery is uncertain. Patients should not be given to understand that brimonidine will reliably and consistently reduce their dark-adapted pupil diameters when needed if such a need might arise on a daily or frequent basis.

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REFERENCES


Late ptosis after laser in situ keratomileusis

As mentioned by Cheng and coauthors, ptosis is sometimes observed after cataract surgery because of multiple factors. However, the development of ptosis after laser in situ keratomileusis (LASIK) is surprising. I would like to contribute a case report of a patient who had a possibly similar etiopathogenesis and clinical findings.

The patient had had bilateral LASIK at another clinic 1 year earlier. After 8 to 9 months, he experienced ptosis in the right eye. He then perceived that the ptosis partly resolved. When the patient presented to me, I observed a 2.0 mm partial ptosis (Figure 1). The levator function was normal, with 19.0 excursion. The patient had no ocular symptoms or signs other than ptosis and reported no systemic disorders.

Figure 1. On presentation, the patient had partial ptosis.

The etiopathogenesis of the ptosis in this patient may have been a levator aponeurosis disinsertion, as mentioned by Cheng and coauthors. The case demonstrates that this complication can appear late after LASIK.

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