

**Sir,
Response to 'Primary surgical posterior capsulotomy during phacovitrectomy'**

We would like to thank Alexander and Luff¹ for their interest in our article.² Their described technique for primary surgical capsulotomy during phacovitrectomy is an interesting approach. We find that the ability to remove the anterior hyaloid and visualisation of the fundus during or after phacovitrectomy due to capsular opacification are rarely an issue. When it does later develop, management with Nd:YAG capsulotomy is usually straightforward.

Conflict of interest

The authors declare no conflict of interest.

References

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**Sir,
Transient retinal artery occlusion during phacoemulsification cataract surgery**

I read with interest the article by Yusuf *et al*¹ on transient retinal artery occlusion (TRAO) during cataract surgery.

I would like to highlight an avoidable but often overlooked cause of TRAO during cataract surgery. After administration of local anaesthesia, some surgeons or anaesthetists use a Honan balloon or similar device to compress the eye, so as to spread the anaesthetic and reduce the incidence of positive vitreous pressure and its attendant complications.² The use of such devices is often poorly documented in the case notes, and if applied incorrectly, they may cause the vitreous pressure to exceed the central retinal artery pressure. This can lead to a total interruption of the blood supply to the retina that only resolves after the globe has decompressed itself with aqueous drainage. Instances of this type of TRAO have been described following intravitreal injections (especially if 0.1 ml or more of fluid is injected), scleral

buckling surgery, and when patients are placed in the prone position during neurosurgical procedures.^{3,4} As will all neuronal tissues, if circulation is not restored within a few minutes, irreversible hypoxic damage to the retina will follow. The amount of time the retina can survive with complete interruption to its blood flow is not known and may vary between patients but is thought to be no more than 5 min.⁵ A different situation exists in thrombo-embolic central retinal artery occlusions, where there may still be some blood flow, albeit small, as evidenced by delayed filling on fundus fluorescein angiography. In these situations, the retina may survive for several hours.

The judicious use of compressive ocular devices for local anaesthesia requires that clinicians pay due attention to the pressure applied and the duration of compression. The intraocular pressure may, however, be difficult to gauge. As a precautionary measure, clinicians would be well advised to release such devices every 60–90 s to ensure there is adequate circulation to the retina and avoid irreversible ischaemic damage.

Conflict of interest

The author declares no conflict of interest.

References

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**Sir,
Reply: Transient retinal artery occlusion during phacoemulsification cataract surgery**

We thank Mr Ahfat¹ for the comments offered in response to our report of a series of patients with transient retinal artery occlusion (TRAO) occurring during phacoemulsification cataract surgery.²