

**Sir,**  
**Role of miotics and cycloplegics in angle closure**

Muralidhar and associates' 18-patient case series on glaucoma in spherophakia is a welcome contribution to the literature on an uncommon type of glaucoma.<sup>1</sup> We would like to query with the authors their thoughts and experience on the role of cycloplegia in the medical management of this condition. This type of glaucoma is technically a 'posterior pushing force' type of glaucoma (as per Ritch classification<sup>2</sup>). This type is subdivided into being of ciliary body, zonule-lens diaphragm or vitreous in origin. As such, it is not 'pupil block' with the role of peripheral iridotomies (PIs) in its management limited to eliminating pupil block, assuming appositional closure on gonioscopy in the diagnostic work up.<sup>3</sup> Miotic agents can induce angle closure as they promote forward movement of the lens-iris diaphragm.<sup>3</sup> In an acute setting, if spherophakia is suspected based on a manifestly myopic eye, combined with a shallow anterior chamber in the setting of elevated intraocular pressure, then, concurrent to the use of pressure lowering agents, the medical management after a PI would include cycloplegia in order to attempt to posteriorly displace the lens-iris diaphragm in the first instance.<sup>4,5</sup> We note the authors point regarding zonular laxity preventing this option being effective, but this can only be confirmed in retrospect. No reference is made to the role of miotics or cycloplegics in the medical management of these patients and further comment would be of educational value.

**Conflict of interest**

The authors declare no conflict of interest.

**References**

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**Sir,**  
**Response to 'Role of miotics and cycloplegics in angle closure'**

We sincerely thank Dr Gupta for his expert comments<sup>1</sup> on our article.<sup>2</sup> Urbanek had coined the term inverse glaucoma to describe the pupillary block caused by miotics. Miotics cause ciliary muscle contraction, slackening the zonules, causing forward movement of the crystalline lens, thus shallowing the anterior chamber and increasing the pupillary block.<sup>3</sup> We have used miotics to prevent an anteriorly dislocated crystalline lens from falling back into the posterior chamber/vitreous before surgery. Ritch and Wand propose the use of thymoxamine after a peripheral iridotomy to prevent lens dislocation into the anterior chamber. Thymoxamine is an alpha adrenergic blocker that causes miosis by inhibiting sympathetic pupillary dilatation and does not affect the ciliary muscle.<sup>4</sup> We do not have any personal experience with the use of thymoxamine and the drug for ocular use is not available in our country. Cycloplegic agents on the other hand relax the ciliary muscles, tighten zonular support thereby pushing the lens back and deepening the anterior chamber.<sup>4</sup> As Dr Gupta D rightly points out, the effect of miotics and cycloplegics would depend on the zonular integrity that is difficult to predict. It has been our experience and that of others<sup>4,5</sup> that the use of mydriatics is associated with a high incidence of lens dislocation in the anterior chamber. Cyclopentolate has been reported to produce bilateral angle closure glaucoma in a patient with Weill Marchesani syndrome.<sup>6</sup> We believe that a laser peripheral iridotomy is a more reliable way to prevent pupillary block in micro-spherophakia and pharmacological agents (miotics/mydriatics) may have a very limited role in the management of this condition. Caution is advised with their use.

**Conflict of interest**

The authors declare no conflict of interest.

**References**

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