Vitreous prolapse through iridectomy site postneedling

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DESCRIPTION
A man in his midteens who had undergone bilateral trabeculectomy for primary congenital glaucoma 14 years earlier presented with pain in his left eye (L/E). On slit lamp examination, the anterior chamber was quiet (figure 1A) with total cupping in both eyes. The intraocular pressure (IOP) in L/E was 28 mm Hg and 26 mm Hg in the right eye (R/E), which were not controlled despite maximal medical treatment. Needling was performed in the L/E after the gonioscopy affirmed the patency of the ostium. This was done using a slit lamp and no antimetabolite was used. There was no intervention in R/E because there was no perception of light. After 2 weeks of needling, the patient’s IOP kept increasing, necessitating a repeat gonioscopy, which revealed vitreous in the ostium (figure 1B).1 After pupillary dilation, zonular dialysis and a localised cataract were observed at the 11 o’clock position (figure 1C), confirming vitreous prolapse from the site of zonular dialysis and its eventual passage into the surgical iridectomy, thereby blocking the internal ostium. The vitreous behind the iris was captured using anterior segment optical coherence tomography in the L/E (figure 1D).2 It was assumed that there was prior zonular dialysis with localised cataractous changes prior to the needling, which could have occurred during the initial surgery. During needling, however, the pressure difference between the anterior and posterior segment causes vitreous prolapse from the zonular dialysis area, eventually blocking the internal ostium. Intrabed scarring, fibrosis, encapsulation in the subconjunctival space, or blockage of the internal ostium with iris, are all common causes of post-operative trabeculectomy failure.3 None of these events occurred in our case; rather, it was caused by a blockage of the internal ostium with vitreous. The source of this vitreous was a pre-existing zonular dialysis tract that prolapsed vitreous post-needling, blocking the internal ostium and resulting in high IOP. Bleb needling has been reported to be performed successfully up to 30 years after trabeculectomy.4 A rare complication of bleb needling is vitreous prolapse through the iridectomy site.5 The prolapsed vitreous may be the only cause of high IOP, resulting in trabeculectomy failure. To control the high IOP, an anterior vitrectomy was performed to remove the prolapsed vitreous strands from the ostium along with a nasal goniotomy. This resulted in a functional bleb with good IOP control.

Contributors
MA contributed to the design of the work and revised for important intellectual content and gave final approval of the version to be published. She is the guarantor. KS cleaned and analysed the data, and drafted the paper. NS contributed to data collection and cleaned and analysed the data. DS revised for important intellectual content.

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Figure 1  (A) Clinical photo of the anterior segment. (B) Gonioscopy showing internal ostium blockage with vitreous (white arrow). (C) Clinical photo showing localised cataract with vitreous strands (white arrow). (D) ASOCT shows vitreous strands behind the iris (white arrow). ASOCT, anterior segment optical coherence tomography.
Learning Points

- Before undergoing any surgical intervention, a gonioscopy should be performed to rule out any causes of high intraocular pressure (IOP).
- Anterior segment optical coherence tomography generates high-resolution images of the anterior segment and guides the patency or occlusion of the internal ostium.
- This case demonstrates how a simple procedure like anterior vitrectomy and goniotomy can help with long-term IOP control.

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REFERENCES


Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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