Endoilluminator-aided cataract surgery in eyes with corneal opacity – A modified surgical approach

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Abstract

Background: Cataract and corneal blindness continue to be leading causes of reversible blindness in India. These can co-exist in a multitude of pathologies such as trauma, healed keratitis (old herpetic scar), chronic degenerative changes such as labrador keratopathy, bullous keratopathy, corneal dystrophies etc. Phacoemulsification in such eyes is rewarding to the patient in terms of minimal intervention, less risk of complications owing to reduced open sky time (as in case of combined keratoplasty), and better predictable visual outcomes. Approach to such eyes with poor visualisation is highly challenging. **Purpose:** We illustrate a modified surgical technique of chandelier illumination through pars plana for cataract surgery in eyes with corneal opacity of varying grades. **Synopsis:** Five patients with dense cataract and small pupils, associated with corneal opacity (leucomatous and macular grade) are described. Closed chamber phacoemulsification with intraocular lens with or without pupil expanders was performed assisted by 23 or 25 gauge pars plana chandelier illumination introduced in the vitreous cavity through a sclerotomy wound made prior to phacoemulsification in the inferotemporal quadrant. **Highlights:** Chandelier illumination aids in reducing the light scatter that occurs due to corneal opacity. Ease of visualisation of lens structures and of performing cataract surgery was noticed. One case was combined with penetrating keratoplasty with reduced open sky time. This assisted technique has advantages such as enhancing visualisation intraoperatively and allowing working in closed chamber. Its self-retaining nature aids bimanual manipulation. No complications were encountered. The video highlights the utility, advantages and practicality of chandelier retroillumination in patients with corneal opacities of varying degree undergoing phacoemulsification. **Video Link:** https://youtu.be/I3z6QG-_wD8

Key words: cataract, corneal opacity, endoilluminator, retroillumination, penetrating keratoplasty

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