

Triple Procedure

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Abstract

Cornea transplants and cataract surgeries are done separately for their known indication. But suppose a patient is having a decompensated cornea with a cataract lens. In that case, we can combine both surgeries (Cataract extraction with intraocular lens implantation with cornea transplant) in a single OT, known as a triple procedure. Per the doctor's expertise, it is safe and comfortable to do two surgeries in one setting with very few known complications.

Keywords: Cornea transplants, Triple procedure, Cataract.

INTRODUCTION

It is the combination of penetrating keratoplasty, cataract extraction, and intraocular lens implantation. It is the surgical choice for patients with corneal disease and cataracts.¹

Open Sky Technique

In this technique, the first corneal excision of the recipient is done, followed by extracapsular cataract extraction and placement of PCIOL, and then suturing of the donor cornea is done (Figure 1).

Advantages

- Cataract extraction becomes easier.
- Reduced surgical time.
- Removal of corneal pathology leads to better visibility of the lens.

Disadvantages

- Patients with any significant posterior pressure run the risk of anterior and posterior capsular tears with subsequent vitreous loss.
- Posterior chamber lens dislocation may occur.

Triple Procedure with Standard Phacoemulsification

It is done either through a clear corneal incision or a scleral tunnel incision. After implanting the PCIOL, the surgeon constricts the pupil and completes penetrating keratoplasty.

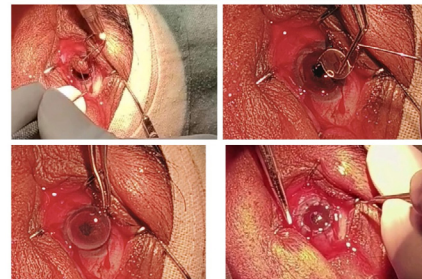
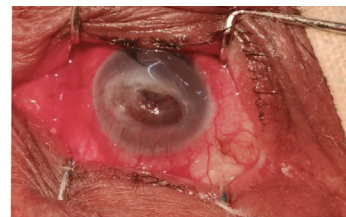


Figure 1: Impending perforation undergoing lens extraction with lens implantation followed by penetrating keratoplasty (Open sky technique)

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Advantages

- More controlled cataract extraction and lens placement.
- Less risk of capsular tear.
- Shorter time during which the eye is open.

Disadvantages

- Slightly longer surgical time.
- Second incision made in the eye.
- If severe corneal pathology is present, visualizing the lens is difficult.

Overall, the triple procedure is a single surgery, is less expensive, and avoids traumatizing the donor endothelium, unlike subsequent cataract extraction and lens implantation.

It also reduces the delay in patients' visual rehabilitation.

Its major disadvantage is that the clinician cannot predict the final keratometric reading, leading to inaccurate IOL calculations and anisometropia due to high refractive errors.²

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