

ABSTRACT:

The modern cataract surgery has given good visual results, but this could deteriorate over times because of Posterior Capsule Opacification (PCO) which is the most frequent complication after cataract extraction. The blood-aqueous as well as blood-retinal barrier damage in diabetic eyes are likely to pose an increased risk of PCO, which can be prevented by improved surgical techniques and by selecting ideal intraocular lens materials and designs.

AIMS AND OBJECTIVES:

To compare the post-operative visual outcome and incidence of posterior capsular opacification after implantation of Hydrophobic Acrylic and poly methyl methacrylate (PMMA) intraocular lenses (IOLs).

MATERIALS AND METHODS:

Ethical clearance was obtained from the institutional ethics board. After the implantation of PMMA and Acrylic IOLs, all patients with Type 1 and Type 2 diabetes mellitus were studied during the study period from April 2014 to September 2014 as per the protocol excel.

INCLUSION CRITERIA:

- Patient with age group 40-70 years with uncomplicated senile cataract.
- Eligible cataracts in diabetics without retinal change
- Using phacoemulsification technique.
- Using continuous curvilinear capsulorrhexis technique.

EXCLUSION CRITERIA:

- Patients with history of previous ocular diseases, surgery
- Patients with history of ocular trauma. previous glaucoma ,corneal pathologies
- Operative complications, posterior segment pathologies.

The patients underwent complete ocular examination pre-operatively. It includes, UCVA and BCVA, pupillary reaction, IOP measurement , Slit lamp examination of anterior segment, cataract grading and posterior segment evaluation using +90D lens and B-scan was done. IOL power was calculated by SRK II formula. Diabetics were taken up for surgery only if PPBS was <140 mg /dl.

After obtaining consent from the patient, half of these patients were implanted with PMMA and remaining with Acrylic IOLs, and followed for a period of 6

months. During their follow-up UCVA, BCVA, Posterior capsular opacification & its grading were noted.

CONCLUSION: Acrylic IOLs produce better visual result in diabetic patients than PMMA IOLs, and that acrylic IOLs may be a better choice in diabetics when PCO is taken into consideration. However, this must be confirmed by further randomized, prospective, and larger studies with longer follow up.

KEY WORDS:

Diabetes mellitus, acrylic intraocular lens, PMMA intraocular lens, posterior capsule opacification.