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Stability of hydrophilic acrylic lenses in cataract surgery combined with posterior segment surgery: 24-months follow-up

Prof. Michele Coppola
Dr Silvia Gomarasca

ASST di Monza - Ospedale di Monza (MB) Italy





Purpose

To evaluate the longer-term outcomes and safety of a preloaded hydrophilic acrylic intraocular lens (IOL) in patients undergoing cataract extraction combined with posterior segment surgery. Secondary outcome was to assess the biocompatibility of the hydrophilic acrylic IOL in terms of biochemical stability (inertia) and any inflammatory response.

Setting

Single site prospective study.



Methods

Patients with macular pucker, macular hole, and/or rhegmatogenous retinal detachment undergoing cataract extraction and posterior segment surgery with a minimum follow-up of 24 months were included in this analysis. All the patients received a preloaded hydrophilic acrylic IOL (Rayner RAO600C) at the time of the surgery.

The IOL was implanted in the capsular bag and posterior capsule capsulorhexis was performed with the vitrectome in all the eyes. All patients underwent complete dilated ocular exams at 1, 3 and 6 months and then 1 and 2 years, postoperatively.



Results

Overall, 420 eyes of 420 patients were included. 65% eyes underwent macular pucker peeling, while 35% underwent vitrectomy for rhegmatogenous retinal detachment and gas tamponade of PDMS / Densiron injection as a vitreal substitute. At 24 months, no cases of lens decentralization in the capsular bag or lens opacification were recorded.

No new or persistent intraocular inflammation were recorded after the 6-month visit through to 24 months.

Conclusion

The medium-term safety of hydrophilic acrylic IOL in terms of lens stability and chemical inertia in patients undergoing cataract extraction and posterior segment surgery was optimal. Hydrophilic acrylic IOLs may be a safe choice in combined anterior and posterior segment surgeries.



Thank you for your attention



