Comparative analysis of different methods of extraction of congenital cataract

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Aim: To assess the clinical outcomes in children, having cataract surgery with posterior capsulorhexis and intraocular lens (IOL) implantation using two techniques: standard surgical steps, in-the-bag IOL with anterior vitrectomy and optic capture of IOL and eliminate the need for vitrectomy.

Methods: The study included 43 children (54 eyes) between two and six years old. Patients were randomized in two groups. Group 1 (phaco-aspiration was accompanied by posterior capsulorhexis followed by an anterior vitrectomy and in-the-bag IOL implantation). Group 2 (phaco-aspiration was accompanied by posterior capsulorhexis and optic capture 3-piece IOL implantation without anterior vitrectomy). Intraoperative complications were documented. All patients had at least 21 months of follow-up (mean 42±13 months [range 21 to 59 months]).

Results: In Group 1 (20 children (32 eyes) 2 eyes developed visual axis obscuration (VAO). Significant VAO was detected three months postoperatively and pars plana membranectomy was performed 4-6 months postoperatively. In Group 2 (23 children (22 eyes) the IOL could not be captured in five eyes (22.7%), no complications occurred in these eyes.

Conclusion: This study found the incidence of complications was comparable between two methods of congenital cataract surgery. Optic capture of IOL is an alternative to the standard approach for pediatric cataract surgery and it eliminates anterior vitrectomy as a routine step during surgery.

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DOI: 10.4172/2155-9570-C2-081