Comparision of surgical outcomes of intraocular lens refixation and intraocular lens exchange with perfluorocarbon liquid and fibrin glue-assisted sutureless scleral fixation.

Authors: Oh S.Y., Lee S.J., Park J.M.

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Abstract:

AimThe purpose of this study was to compare the surgical outcomes of intraocular lens (IOL) refixation with intraocular lens exchange using perfluorocarbon liquid (PFCL) and fibrin glue-assisted sutureless scleral fixation surgery in patients with dislocation of the IOL.MethodsTwenty-five eyes of 25 patients who underwent surgery for dislocated IOLs with PFCL and fibrin glue-assisted scleral fixation were studied; 13 eyes experienced IOL refixation (in-the-bag and out-of-the-bag), and 12 eyes experienced IOL exchange. Preoperative and postoperative clinical features from patient charts and 25 eyes with >6 months' follow-up information were reviewed and analyzed.ResultsAt postoperative 6 months, best-corrected visual acuity (BCVA) and spherical equivalent of IOL refixation and exchange were significantly improved (P=0.042, P=0.001), and endothelial cell density was significantly decreased in the two groups with no significant difference between them. Surgically induced astigmatism of IOL refixation improved from 0.90+/-0.47 to 0.61+/-0.37 (P=0.012), and IOL exchange improved from 1.17+/-0.64 to 0.73+/-0.37 (P=0.037) at postoperative 6 months, with no significant difference between the two groups. Complications occurred in four eyes in the IOL refixation group and in three eyes in the IOL exchange group.ConclusionPFCL and fibrin glue-assisted IOL sutureless scleral refixation or exchanged fixation was an effective surgical treatment for IOL dislocation. Also, because postoperative BCVA, surgical outcomes, and complications did not differ significantly between IOL refixation and exchange surgery, if IOL exchange surgery is not indicated, IOL refixation surgical techniques should be considered.