Effect of surgical experience on the anatomical success of phacovitrectomy for the management of rhegmatogenous retinal detachment

Kyu-Hyung Park, MD
Seongnam, Gyeonggi

Min Seok Kim, MD

Purpose:
To compare the efficacy and safety between phacovitrectomy and lens-sparing vitrectomy for primary rhegmatogenous retinal detachment (RRD) treatment according to surgical experience.

Methods:
We retrospectively reviewed the charts of 193 patients with primary RRD who underwent either phacovitrectomy or lens-sparing vitrectomy. Patients were operated by two experienced surgeons or eight vitreoretinal fellows and had a minimum follow-up of 6 months. Anatomical success rate, postoperative complications, and best-corrected visual acuity were compared.

Results:
Primary anatomical success rate was 91.7% for lens-sparing vitrectomy and 97.6% for phacovitrectomy in the experienced surgeon group ($P=0.396$). The fellow surgeon group had lower primary success rate for phacovitrectomy than for lens-sparing vitrectomy (85% vs. 94.1%, $P=0.148$). During phacovitrectomy, one zonulysis case in the experienced surgeon group and four posterior capsular rupture cases in the fellow surgeon group were noted. Cystoid macular edema was found only after phacovitrectomy (10 of 82 [12.2%]), and epiretinal membrane incidence was higher after phacovitrectomy (23 of 82 [28%]) than after lens-sparing vitrectomy (9 of 111 [8.1%]).

Conclusions:
Combined phacoemulsification and vitrectomy by experienced and inexperienced surgeons has no additional benefit in improving the surgical outcome of primary RRD management, and phacovitrectomy may not be a desirable option in inexperienced surgeons.