Core Vitrectomy is Useful for Performing Phacoemulsification and Intraocular Lens Implantation as Primary Surgery for Acute Angle Closure Glaucoma

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Purpose : To evaluate the results of phacoemulsification and intraocular lens implantation (PEA+IOL) by means of a core vitrectomy as primary surgery for acute angle closure glaucoma (AACG). **Setting** : Department of Ophthalmology, Japan Red Cross Wakayama Medical Center, Wakayama, Japan. **Methods** : We reviewed the records of six patients who underwent primary PEA+IOL with an additional core vitrectomy for AACG. **Results** : The mean preoperative intraocular pressure (IOP) was 57.5 mmHg. No intraoperative complications were observed. The mean postoperative IOP was 16.0 mmHg one day after surgery. No additional glaucoma surgery was necessary in any eye. At the final visit, the mean postoperative IOP was 11.3 mmHg. No eyes required antiglaucoma medication. No occurrence of bullous keratopathy was observed in any case throughout the follow-up period. **Conclusions** : PEA+IOL with additional core vitrectomy was thus found to be a safe and effective treatment for both postoperative IOP control and the preservation of corneal endothelial cells. A core vitrectomy should therefore be performed when it is difficult to perform PEA+IOL for AACG.

Key words ① **Acute angle closure glaucoma** ② **Core vitrectomy** ③ **Phacoemulsification** ④ **Cataract surgery** ⑤ **Intraocular lens implantation**

Acute angle closure glaucoma (AACG) is classically treated by either peripheral iridectomy (PI) or laser iridotomy (LI) to relieve the symptoms of pupillary block. Several studies have previously evaluated the effect of cataract surgery on chronic angle closure glaucoma (CACG)[1]. More recently, Yoon JY reported the effectiveness of phacoemulsification and intraocular lens implantation (PEA+IOL) for AACG patients whose intraocular pressure (IOP) could not be sufficiently controlled by conventional treatment[2]. Ming suggested that PEA+IOL was useful for the primary treatment of AACG[3]. Jacobi also concluded that PEA+IOL was a better procedure for the treatment of uncontrolled AACG when faced with options of PEA+IOL or PI[4].

For CACG, the surgery of PEA+IOL is difficult because of a shallow anterior chamber and weakness of Zinn's zonule[5], while in the case of AACG, it is more difficult to perform because of a shallower anterior

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