

## Treatment of Advanced Glaucoma Through Integrated Medicine

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### Summary

Glaucoma is a neurodegenerative disease characterized by the progressive loss of retinal ganglion cells and optic nerve axons. It is accompanied by visual field sensitivity loss and, eventually, irreversible visual loss [1]. Advanced glaucoma causes visual field concentric narrowing, which leads to the formation of a tubular visual field. The characteristics of advanced glaucoma are complicated, making its treatment difficult. Thus, a comprehensive evaluation of the preoperative risk of glaucoma is needed. This paper presents the use of integrated medicine to treat advanced glaucoma.

**Keywords:** Advanced glaucoma; Integrated medicine

### Case Report

A 47-year-old woman was admitted to our department on an emergency basis because of a sudden onset of vision loss without eye pain, nausea, and vomiting. We diagnosed it as secondary glaucoma (Oculus laevis nearly absolute phase). The woman had a history of uveal effusion syndrome in both eyes, and she underwent cataract extraction, vitrectomy, and silicone oil filling in the right eye. The right eye became blind after the removal of silicone oil. Posterior scleral incision surgery was performed to prevent vision loss in the left eye. The surgery induced a high intraocular pressure, which was controlled by Mikelan. She had no family history of glaucoma, and she was under systemic hormone treatment for nearly 6 years because of kidney disease.

In the ophthalmic examination, the visual acuity was OD: hand move and left eye (OS): 20/50. The intraocular pressure was 17 mmHg OD and 35 mmHg OS that both eyes received a therapeutic regimen of drugs. Slit lamp biomicroscopy revealed iris segmental atrophy, posterior temporal synechiae, and mild opacity of the lens cortex in OS (Figure 1).



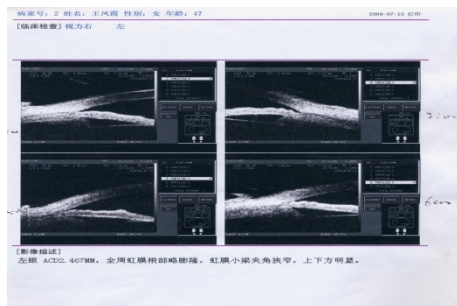
**Figure 1:** Slit lamp biomicroscopy revealed iris segmental atrophy, posterior temporal synechiae, and mild opacity of the lens cortex in OS.

while clear cornea in both eyes (OU). Fundusoscopic examination presented a cup-disc ratio of 1.0 and a white disc in OS (Figure 2).



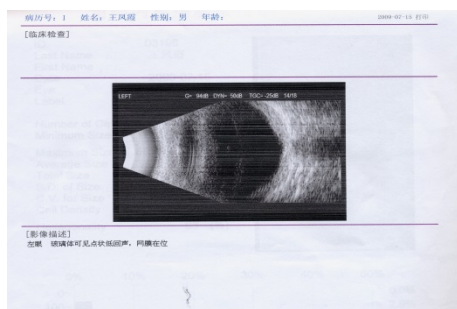
**Figure 2:** Fundusoscopic examination presented a cup-disc ratio of 1.0 and a white disc in OS.

Gonioscopy using the van Herick method and 360° opened angle in OS showed that the anterior chambers were shallow (grade I). Ultrasound biomicroscopy presented an anterior chamber depth of 2.467 mm and a slight swelling of the iris (Figure 3).



**Figure 3:** Ultrasound bio microscopy presented an anterior chamber depth of 2.467 mm and a slight swelling of the iris.

Ocular ultrasonography verified that the retina is in position (Figure 4).



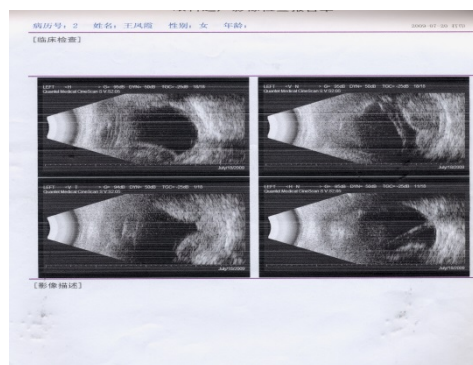
**Figure 4:** Ocular ultrasonography verified that the retina is in position.

We performed combined trabeculectomy, posterior scleral marsupialization, and vitreous aspiration, accompanied by local and systemic hormone therapy and hemostasis blood circulation treatment. Examination on the first postoperative day showed an intraocular pressure of 31 mmHg, which decreased to 19 mmHg during incisioning of a large pale yellow liquid assembled under the conjunctiva. Clear cornea in OS and an ACD of 2.5 CT were also observed on the first postoperative day (Figure 5).



**Figure 5:** Clear cornea in OS and an ACD of 2.5 CT were also observed on the first postoperative day.

Examination on the fifth postoperative day showed the expression of choroid, optic disc, and posterior of retina. Ocular ultrasonography displayed the detachment of the retina and choroid. We invited Professor Xiaoxin Li for a consultation and referral for further treatment (Figure 6).



**Figure 6:** Ocular ultrasonography displayed the detachment of the retina and choroid.

## Discussion

Many factors, such as age, family history of glaucoma, high myopia, diabetes, and hypotension, influence the defect tolerance ability of intraocular pressure in advanced glaucoma, in addition to high intraocular pressure or intraocular pressure fluctuation. Pure medication is insufficient to control a high intraocular pressure. Moreover, surgical treatment of patients with advanced glaucoma entails relatively large risks, such as surgical complications and limited visual function recovery. Thus, doctors often follow a cautious approach to surgical treatment. In this case, we carried out hospital consultation and clinical consultancy by using the idea of integrated medicine to evaluate the preoperative risk of glaucoma comprehensively. The purpose of this strategy is to find a safe and reliable method to treat patients with glaucoma, improve the quality of life of patients with advanced glaucoma, and reduce the pressure of society. As a general belief, a specialist is only a master of his own field and has insufficient knowledge of other major or all types of diseases.

Integrated medicine has been utilized in other areas [2], particularly in the treatment of ophthalmologic diseases [3-5]. Therefore, the concept of integrated medicine in the treatment of glaucoma must be strengthened comprehensively to provide improved healthcare services to patients with glaucoma.

### Acknowledgments

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