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Case Study

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MANAGEMENT OF IDIOPATHIC FULL THICKNESS MACULAR HOLE: A CASE REPORT

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ABSTRACT

A 61-year-old male presented with sudden painless diminution of vision and floaters in the right eye. Clinical examination and imaging confirmed a diagnosis of idiopathic full thickness macular hole (FTMH), stage 4. The patient underwent 25G pars plana vitrectomy (PPV), internal limiting membrane (ILM) peeling with dye assistance, and 20% sulphur hexafluoride gas tamponade. Postoperative recovery was successful with significant visual improvement from CF at 3m to 6/9 within a week. This report discusses the pathogenesis, diagnostic tools, and surgical outcomes associated with idiopathic FTMH.

INTRODUCTION

Macular hole (MH) is a full-thickness defect in the foveal retina, most commonly idiopathic in nature. It presents with blurred vision, metamorphopsia, and central scotoma. The peak incidence occurs in the seventh decade and is more prevalent among females. Idiopathic MH is believed to result from vitreofoveal traction due to anomalous posterior vitreous detachment. Classification by Gass and Johnson and by the International Vitreomacular Traction Study Group helps in staging and guiding management.

CASE PRESENTATION

A 61-year-old male presented with complaints of sudden, painless diminution of vision in the right eye along with floaters and metamorphopsia for one week. He had a history of bilateral cataract surgery 10 years prior with good postoperative visual gain. There was no history of trauma, diabetes, hypertension, or other systemic illness.

On examination, visual acuity in the right eye was CF at 3m. Fundus evaluation and swept-source OCT revealed a full thickness macular hole with yellowish deposits at the base and a positive Watzke-Allen and laser aiming beam test. Macular Hole Index (MHI) was calculated to be 0.599.

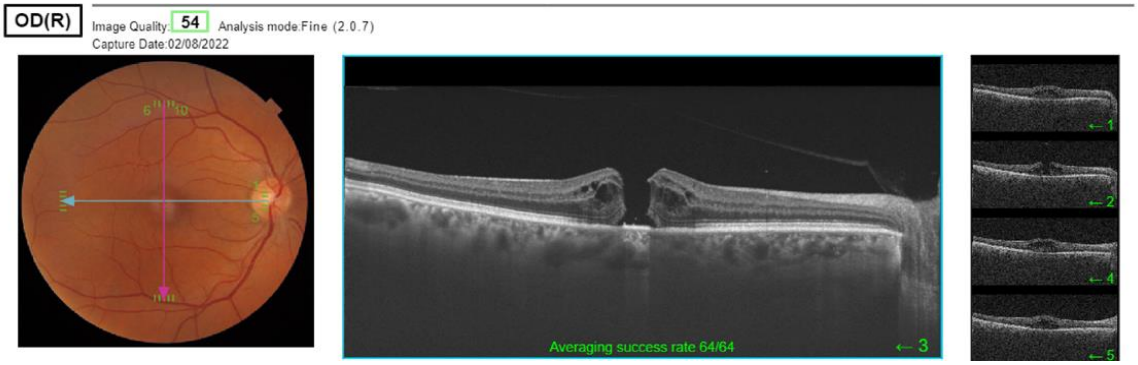

Figure 1: Preoperative image showing FTMH in right eye.

DIAGNOSIS

Right eye idiopathic full thickness macular hole, Stage 4.

MANAGEMENT AND SURGICAL PROCEDURE

The patient underwent right eye 25G pars plana vitrectomy with dye-assisted internal limiting membrane peeling and 20% SF6 gas tamponade. Preoperative

counseling emphasized prone positioning post-surgery and the potential risks including retinal detachment, tear, and endophthalmitis.

POSTOPERATIVE OUTCOME

The patient was instructed to maintain strict prone positioning and prescribed topical moxifloxacin, betamethasone, and atropine. One week postoperatively, vision improved to 6/9, indicating successful anatomical and functional recovery.

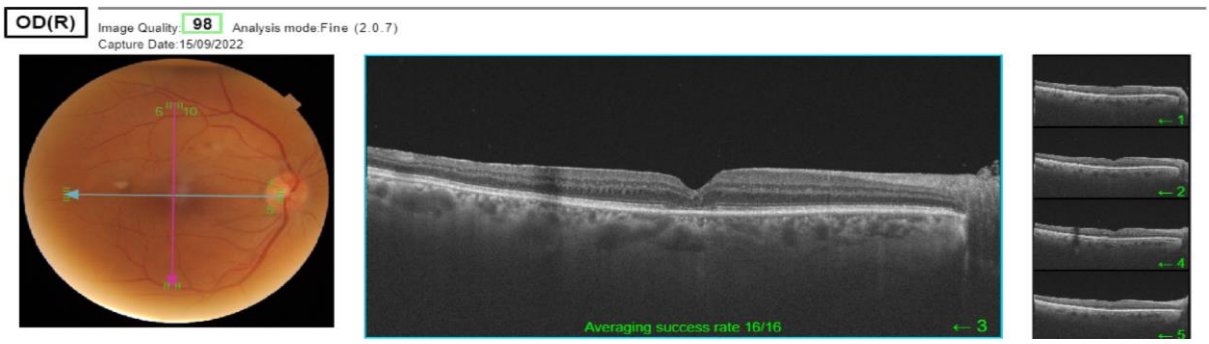

Figure 2: Post operative image showing successful anatomical outcome.

DISCUSSION

Idiopathic FTMH is managed surgically with PPV and ILM peeling as the gold standard. Pathogenesis involves vitreofoveal traction and cystoid degeneration. Predictors of surgical success include MHI > 0.5, duration < 6 months, and adherence to postoperative positioning. Recent innovations such as ILM flap techniques and adjuvant therapies continue to enhance outcomes. The patient in this case responded well to conventional surgical management, demonstrating the effectiveness of standard PPV and ILM peeling.

CONCLUSION

Early diagnosis and timely surgical intervention in idiopathic full thickness macular hole lead to significant anatomical and functional improvement. ILM peeling and gas tamponade remain the mainstay of treatment, with postoperative positioning playing a critical role.

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