

# Post Cataract Surgery Endophthalmitis Caused by *Acinetobacter Baumannii*

Shilpi H. Narnaware<sup>1</sup>, Prashant K. Bawankule<sup>2</sup>

<sup>1</sup>Fellowship in Vitreo-Retina, Consultant Vitreo-retina and ROP Specialist, Sarakshi Netralaya, 19, Rajiv Nagar, Wardha Road, Nagpur-440025 Maharashtra, <sup>2</sup>Vitreo-Retinal Surgeon, Sarakshi Netralaya, 19, Rajiv Nagar, Wardha Road, Nagpur-440025 Maharashtra, India

**Corresponding author:** Dr. Shilpi H. Narnaware, Sarakshi Netralaya, Plot No. 19, Rajiv Nagar, Wardha Road, Nagpur-440025, Maharashtra, India

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## A B S T R A C T

**Introduction:** Endophthalmitis caused by *Acinetobacter Baumannii* is emerging cause of infection resulting in poor visual outcomes.

**Case report:** We report a case of post cataract surgery endophthalmitis, who presented on second post-operative day. Aqueous tap was sent followed by intra-vitreous antibiotics on day of presentation. Following culture and sensitivity report systemic and intra-vitreous antibiotics were changed to match the spectrum of sensitivity. Patient recovered after 3 doses of intra-vitreous antibiotics on alternate day to 20/60 vision at glass appointment. Previous reports show poorer outcome in almost all the cases, except one, which showed improvement after vitrectomy. Our case was essentially managed only medically.

**Conclusion:** Timely diagnosis and prompt management according to drug sensitivity can prevent the devastating complications related to *A. Baumannii* infection.

**Keywords:** *Acinetobacter Baumannii*, Endophthalmitis.

## INTRODUCTION

Endophthalmitis caused by *Acinetobacter Baumannii* is a rare but emerging cause of infection with poor visual and anatomical outcomes. There are reports of endogenous or post-traumatic endophthalmitis with this bacteria. Few reports of post-cataract endophthalmitis by *A. Baumannii* are reported in literature, indicating poorer visual and anatomical outcomes in maximum cases, despite intensive management.<sup>1-4</sup> It is a slow growing gram-negative bacterium which is generally an inhabitant of soil, vegetation and aquatic environment. It has emerged as one of the most troublesome pathogens for health care professionals because of its resistance to multiple drugs, as reported in various case series.

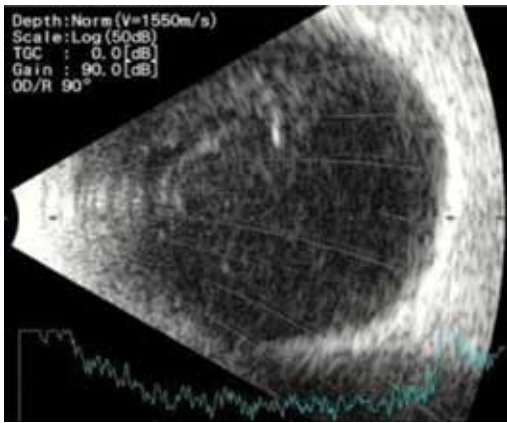
## CASE REPORT

We report a case of acute post-operative endophthalmitis caused by *A. Baumannii* following uneventful cataract surgery. 70-year-old, healthy, non-immunocompromised female, underwent right eye cataract surgery for senile cataract. On 2<sup>nd</sup> post-operative day, patient presented with complaints of blurred vision, redness and pain. Visual acuity was 3/60 on Snellen's chart. Examination revealed blood clot with streak hypopyon (1mm) in anterior chamber (Fig 1). Fundus examination revealed vitreous haze of 3+, with hazy view of disc. Ultrasound examination of right eye revealed

moderate vitreous echoes (Fig 2) with attached retina with no evidence of thickening of coats. Aqueous tap was sent for culture and sensitivity and intravitreally Vancomycin (1 mg/0.1ml) & Amikacin (0.1mg/0.1ml) was given. On first follow-up, anterior chamber hypopyon and vitreous haze persisted. Culture report revealed growth of *Acinetobacter Baumanni* and sensitivity report showed resistance to fluoroquinolones group / Gentamycin / Amikacin. Bacteria was found to be sensitive to Cefazidime, Doxycycline,



**Figure-1:** Slit Lamp Examination showing blood clot with streak hypopyon (1mm) in anterior chamber



**Figure-2:** B-Scan revealing moderate vitreous echoes with attached retina

Colistin, Imipenem, Sulbactam. Accordingly patient was started on oral Doxycycline 100 mg twice a day for 10 days and intravitreally Vancomycin (1 mg/ 0.1 ml), Ceftazidime (2.25 mg / 0.1 ml) and Dexamethasone (0.4 mg/0.1 ml) on alternate day regimen. Patient received total 3 doses of intra-vitreous antibiotics. At final follow up best corrected visual acuity was 20/60, no hypopyon in anterior chamber, clear vitreous with healthy and full view of attached retina on fundus examination.

## DISCUSSION

*A. baumannii* belongs to Moraxellaceae family<sup>1</sup> which can survive under a wide range of environmental conditions and persists on surfaces for extended periods. Recently, it has emerged as an important cause of community acquired infections and a rare cause of endophthalmitis. Infection with *A. Baumannii* is an important cause of nosocomial infections. Chen et al<sup>2</sup> has reported two cases, one was endogenous and other was post keratoplasty with outcome of 20/60 in 1 case and No PL in other. While out of four cases reported by Roy R et al<sup>3</sup> three were post cataract surgery and one post trauma and they could salvage only one eye with visual outcome of 20/200. Favourable outcome after good microbiological evaluation and timely performed vitrectomy was reported by G. Biigren et al<sup>4</sup> in their case report. In our case we could manage the case medically with visual outcome of 20/60. Acquired resistance to multiple antibiotics and poor anatomical and visual prognosis poses a great challenge in front of surgeons regarding its management of infection by *A. Baumannii*. High level of sensitivity to Ciprofloxacin was reported by Gopal et al<sup>5</sup> in another sub-species of acinetobacter, while Chen et al<sup>2</sup> reported sensitivity to Imipenem in their series. Roy R et al<sup>3</sup> reported 100% sensitivity to Ciprofloxacin and 100% resistance to Ceftazidime. In our case the bacteria was resistant to Ciprofloxacin and other fluoroquinolones while highly sensitive to Colistin, Ceftazidime and Doxycycline.

## CONCLUSION

Antimicrobial resistance greatly limits the therapeutic options for patients who are infected with these bacteria. Timely diagnosis and prompt management according to drug sensitivity can prevent the devastating complications related to *A. Baumannii* infection. We were lucky to manage

this case medically only and could salvage the eye.

## Abbreviations

*A. baumannii* (*Acinetobacter baumannii*, mg (milligram), ml (milli-litre), mm (milli-meter).

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