



Endogenous Endophthalmitis : A Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

This study aims to present a case of endogenous endophthalmitis complicating a pulmonary abscess, and to discuss the clinical features of this pathology. Acute endophthalmitis is a pan uveitis most often resulting from bacterial infection; it is termed endogenous when dissemination occurs via the hematogenous way from a septic site. This is a 75-year-old patient with no history of ocular surgery or other endo-ocular procedures or trauma, who presented 2 years ago with a poorly treated pulmonary abscess, and who came to the emergency department with a painful red eye associated with decreased visual acuity in the left eye. Vitrectomy may also be indicated. Given the fragile nature of the patient's condition, the prognosis is often poor, both anatomically and functionally.

Keywords: *Endogenous endophthalmitis; pan uveitis; pulmonary abscess; pathology; case report.*

1. INTRODUCTION

Acute endophthalmitis is a pan uveitis most often resulting from bacterial infection; it can be

endogenous or exogenous ;it is termed endogenous when dissemination occurs via the hematogenous dissemination from a septic focus. It is a rare pathology, occurring mainly in

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frail subjects, and often has a poor visual prognosis. Our aim is to present a case of endogenous endophthalmitis complicating a pulmonary abscess, and to discuss the clinical features of this pathology.

2. CASE PRESENTATION

This is a 75-year-old patient with no history of ocular surgery or other endo-ocular procedures or trauma, who presented 2 years ago with a poorly treated pulmonary abscess, and who came to the emergency department with a painful red eye associated with decreased visual acuity in the left eye. Examination of the left eye revealed visual acuity with finger movements, diffuse conjunctival hyperemia with purulent secretions, corneal edema, KPS (superficial

punctiform keratitis), a 2-cross anterior chamber tyndall, a hypopyon and a nuclear cataract. Examination of the posterior segment reveals dense hyalitis, making the Funduscopy exam inaccessible to clinical examination.

The diagnosis of endogenous endophthalmitis was accepted. A microbiological culture was launched. The patient received triple systemic antibiotic therapy (imipenem + glycopeptide + levofloxacin), as well as local treatment with ceftazidime + glycopeptide eye drops and a single IVT of the latter. Local corticosteroids were not introduced as a secondary treatment, as the patient's general condition deteriorated rapidly, preventing further IVTs and vitrectomy. Drainage of the pleural fluid was not indicated because it was encysted *. The patient died of septic shock.



Fig. 1. Aspect of the eye on admission, showing conjunctival hyperemia
B-mode ultrasonography reveals dense, compartmentalized vitreous echoes and choroidal thickening

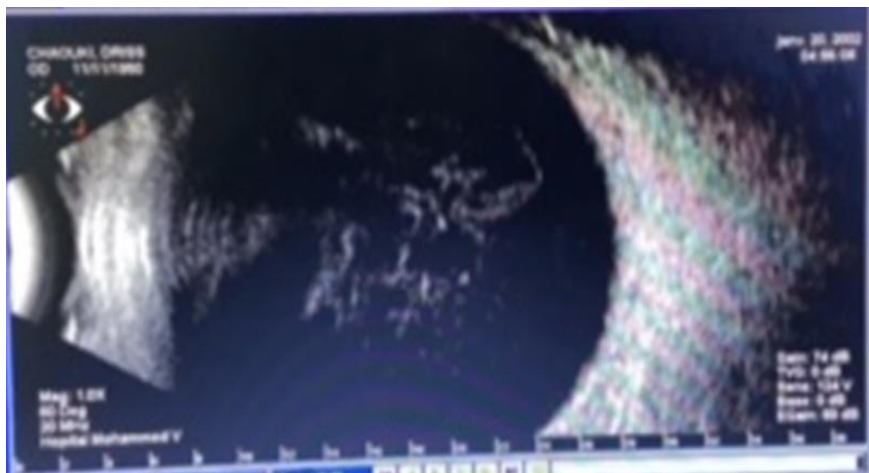


Fig. 2. B-mode ocular ultrasound showing the presence of vitreous echoes
An infectious disease workup revealed a CRP of 322 mg/l and a right lung abscess on chest CT



Fig. 3. Chest CT scan showing a pulmonary abscess of the right fowler (25mm) complicated by encysted pleurisy

3. DISCUSSION

Endogenous endophthalmitis EE accounts for 2 to 8% of all endophthalmitis [1], and is caused by hematogenous dissemination of an infectious agent, with passage through the blood-ocular barriers. The eye is considered to be a secondary site or septic metastasis of a distant infection, often involving a deep endocardial, renal or digestive focus, but the pulmonary focus is rarely described. Main signs include a sudden drop in vision associated with redness and pain in the eye. Clinically, there are signs of infection and endocular inflammation. Bacteriological samples are positive in 80 to 96% of cases [2]. A small number of EE cases are also reported secondary to occult systemic infections, which are culture negative. Recently few case series have been reported in patients with COVID-19 possible reason being immunosuppression [3,4,5] Urgent treatment is imperative, and is based on the same modalities as for exogenous endophthalmitis [6] triple systemic antibiotic therapy with good intraocular penetration, combined with intravitreal antibiotic injections and fortified eye drops. Local or general corticosteroid therapy is started secondarily, once the infectious process has been controlled. Vitrectomy may also be indicated. Given the fragile nature of the patient's condition, the prognosis is often poor, both anatomically and functionally. Final visual acuity is unsatisfactory, and enucleation may be required in 30% of cases [7] In a study conducted to determine factors resulting in poor visual outcome, worse initial visual acuity and centrally located lesions were found to be associated with poor visual outcomes. The same study showed that early vitrectomy prevented the development of retinal detachment. This underscores the importance of detecting and promptly treating the disease at early stages to preserve visual acuity [8,9].

4. CONCLUSION

Endogenous endophthalmitis is a medical emergency whose early treatment determines visual prognosis. Untreated, it can spread rapidly,

involving the orbit and central nervous system. Identifying the initial septic source and treating it quickly and appropriately can improve functional and vital prognosis.

CONSENT

As per international standards or university standards, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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