

CRYPTOCOCCUS NEOFORMANS CAUSING CHRONIC ENDOPTHALMITIS: A CASE REPORT

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Abstract: Cryptococcus neoformans is a rare cause of exogenous endophthalmitis especially in immunocompetent patient. Here, we report a case of exogenous endophthalmitis caused by *Cryptococcus neoformans* in an immunocompetent patient.

Index Terms: Endophthalmitis, *Cryptococcus neoformans*, Immunocompetent

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Introduction

Endophthalmitis is inflammation condition of intraocular cavities (ie, the aqueous and/or vitreous humor), caused by an infective agent. Exogenous endophthalmitis occurs due to direct inoculation of an organism from the outside. This inoculation may be a complication of ocular surgery, foreign bodies, blunt or penetrating ocular trauma. Normally, blood-ocular barrier protects the eye against invading organisms but any procedure that disrupts the integrity of the globe (eg, cataract, glaucoma, retinal, radial keratotomy, intravitreal injections) makes the eye prone to exogenous endophthalmitis. Postoperative endophthalmitis is a dreaded complication usually associated with a poor prognosis.^[1] It may occur following any ocular surgery but 90% of the times it occurs post cataract surgery as worldwide, this is the commonest ocular surgery done.^[2] Fortunately, postoperative endophthalmitis is a rare clinical occurrence, but can cause severe visual impairment or even the loss of an eye.^[3]

Case report

A 45 yrs old male patient underwent cataract surgery. Two weeks post -surgery he developed diminished vision and redness in eye. He was clinically diagnosed as a case of endophthalmitis. For this lens removal and anterior vitrectomy was done but his condition did not improve. He then presented to our institute. On slit lamp examination he had circumcorneal congestion, vision of counting fingers at 1 meter. His fundal examination, intra ocular pressure was normal. Patient was HIV negative.

Patient was admitted and started on oral and topical antibiotics. Anterior chamber wash was done and sample of the same was sent to department of microbiology for fungal culture. Direct microscopy was done but there were no significant findings. Sample was inoculated on Sabouraud's dextrose agar and kept at 37°C and 25°C. After two days cream colored, moist colonies were observed. Gram stain was performed on the growth from the colony which showed budding yeast cells. India ink preparation was done which showed multiple clear halo. The colony was inoculated on urease agar and isolate was identified as *Cryptococcus neoformans*. This was confirmed using vitek AST-YS08 card. Patient was administered oral voriconazole and intra-vitreous injection of Amphotericin B. He was discharged two days later with vision of 6/60 and no complaints.

Discussion

In environment, cryptococcus has been found in pigeon droppings, and is acquired by inhalation of the propagules by immunocompromised individuals [4]. *C. neoformans* develops encapsulated fungal yeast cells, which can disseminate from lung tissues to other organs (fungemia), especially to the central nervous

system [5, 6]. Intraocular cryptococcosis is usually associated with cryptococcal septicemia and in immunocompromised patients. However, report of it causing infection in immunocompetent patients are also present [7]

Conclusion

Microbiologists should be aware of cryptococcus as a cause of endophthalmitis in non-immunocompromised patient. Timely diagnosis and prompt antifungal therapy could prevent vision loss and provide symptomatic relief to the patient .

Reference

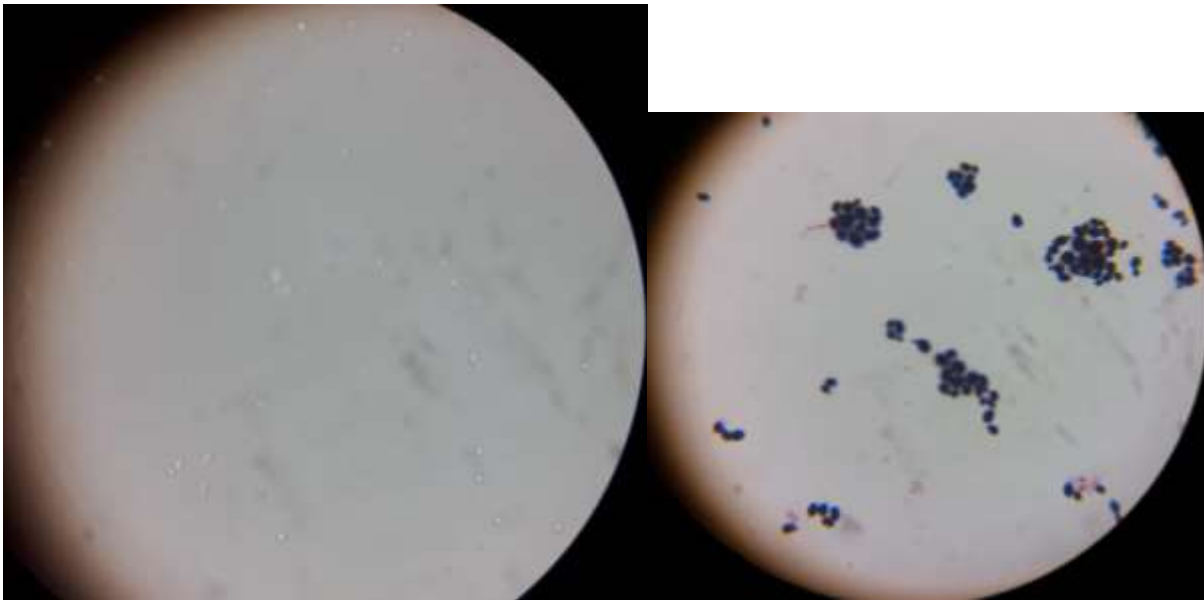
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Conjunctival congestion of the right eye



Growth on SDA



India ink preparation from SDA

Gram stain from the growth on SDA

