

"Unmasking Cryptococcus Neoformans: A Rare Case of Meningitis in a Healthy 19-Year-Old"

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INTRODUCTION Cryptococcus neoformans meningitis is an opportunistic fungal infection that can occasionally affect immunocompetent individuals with devastating outcomes. This report presents a rare case of cryptococcal meningitis in a healthy 19-year-old male, highlighting the clinical presentation, the diagnostic value of India ink staining, and the high mortality risk associated with delayed diagnosis and treatment.

CASE DESCRIPTION

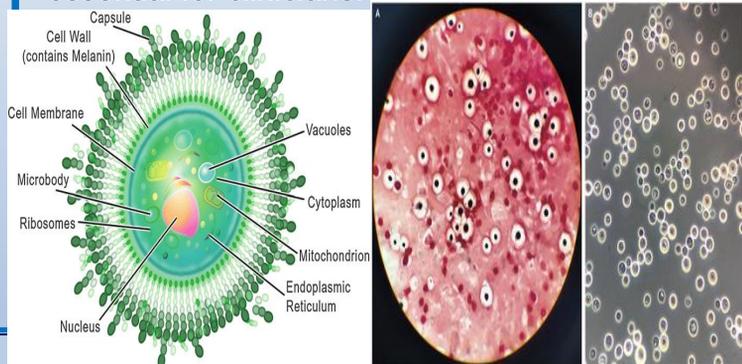
A previously healthy 19-year-old male presented to the emergency department with chief complaints of fever for five days, vomiting, neck pain, and an acute onset of right eye squint. Upon assessment, the patient was alert, not septic-looking, and hemodynamically stable. Neurological examination revealed cranial nerve III palsy. He had no known chronic illnesses, immunosuppressive conditions, or recent travel history. His contrast-enhanced CT (CECT) brain scan showed no evidence of meningoencephalitis. This patient subsequently underwent a lumbar puncture, which demonstrated encapsulated yeast cells with a characteristic clear halo, indicative of Cryptococcus neoformans, as observed through India ink staining. Subsequent cryptococcal antigen testing and fungal culture confirmed the diagnosis. Unfortunately, the patient deteriorated in the ward and was intubated before being managed in the ICU, despite being on intravenous amphotericin B and fluconazole, which were continued for two weeks since admission. Repeated lumbar puncture revealed the persistent presence of Cryptococcus neoformans. The patient succumbed in the ICU after a hard-fought battle against the invasive fungal infection *Cryptococcus neoformans*.

DISCUSSION

Cryptococcus neoformans has a predilection for the central nervous system due to its ability to cross the blood-brain barrier. Its polysaccharide capsule inhibits phagocytosis and contributes to virulence. Despite antifungal therapy, cryptococcal meningitis carries a high mortality rate up to 20–30% in immunocompetent individuals and higher in those immunocompromised. Delays in diagnosis, increased intracranial pressure, and inadequate management of complications contribute significantly to poor outcomes.

CONCLUSION

This case highlights the importance of considering cryptococcal meningitis in the differential diagnosis of meningitis, even in immunocompetent patients. Early identification via India ink staining and prompt antifungal treatment are crucial. Given the high mortality associated with delayed intervention, awareness of such atypical presentations is essential for clinicians.



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