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Enterococcus and Tuberculous CNS Co-infection in an Immunocompetent Female: A Case Report

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BACKGROUND

CAS-086

Central Nervous System (CNS) co-infection with Mycobacterium Tuberculosus (MTB) and Enterococcus species is rare especially among immunocompetent individuals. We report the first documented case of concurrent Enterococcus faecalis meningitis and tuberculous meningitis (TBM) in a healthy adult female with presumed ocular tuberculosis that was successfully managed with medical therapy alone without the need for surgical intervention.

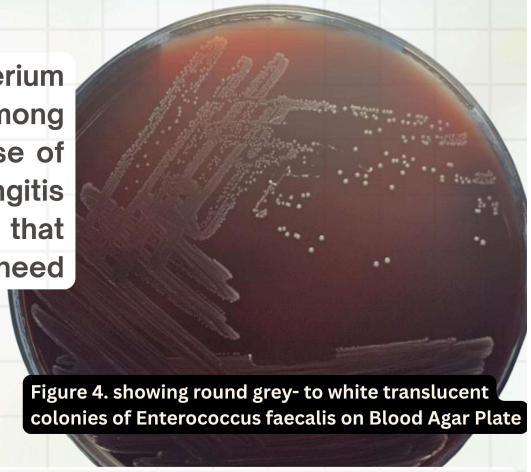

Figure 4. showing round grey- to white translucent colonies of Enterococcus faecalis on Blood Agar Plate

CASE PROPER

A 29-year-old Filipino female presented with subacute fever, behavioral changes, progressive somnolence, and headache. On admission, she was febrile with nuchal rigidity and a decreased Glasgow Coma Scale (GCS). Cerebrospinal fluid (CSF) analysis revealed lymphocytic pleocytosis, hypoglycorrhachia, and elevated protein. She was started empirically on cefepime and standard anti-tuberculosis therapy consisting of isoniazid, rifampicin, pyrazinamide, and ethambutol. Despite this, she had persistent headache and nuchal rigidity. GeneXpert MTB/RIF detected drug-susceptible Mycobacterium tuberculosis, while CSF culture via Brain Heart Infusion broth grew Enterococcus faecalis. Fundoscopic examination revealed a subretinal choroidal tubercle, suggestive of ocular tuberculosis and disseminated disease. Targeted therapy with intravenous ampicillin was subsequently initiated, leading to marked clinical improvement, including normalization of GCS and resolution of central nervous system symptoms. At the fourth month of follow-up, the patient remained asymptomatic with no recurrence of headache or nape pain, and a repeat cranial CT scan showed a relative decrease in the degree of communicating hydrocephalus compared with the prior study.

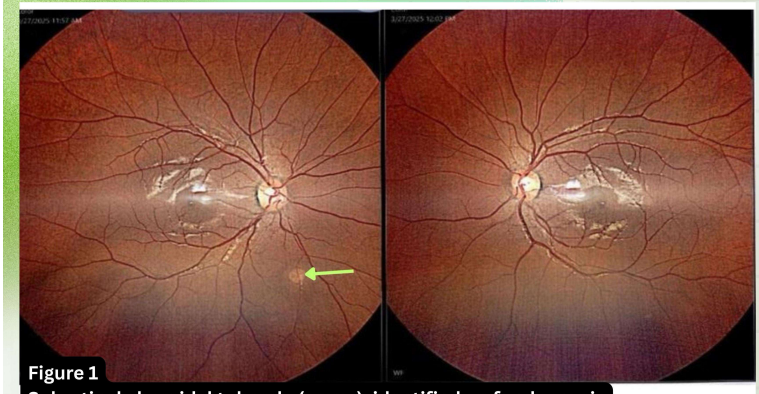

Figure 1
Subretinal choroidal tubercle (arrow), identified on fundoscopic examination, consistent with ocular tuberculosis

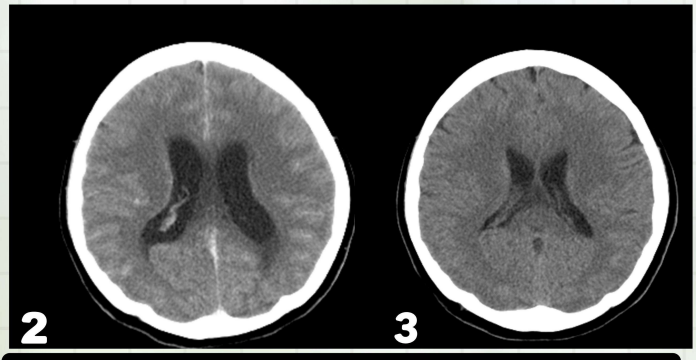

Figure 2. Cranial CT Scan Taken March 2025 showing hydrocephalus with repeat CT taken after 4 months showing markedly decreased hydrocephalus (Figure 3)

CONCLUSION

Clinicians should maintain a high index of suspicion for CNS co-infections when patients have atypical presentations of meningitis, especially in TB-endemic settings. This case highlights the critical importance of microbiologic confirmation, timely shift to targeted therapy, and neurologic monitoring. Clinical recovery without surgical intervention and the patient's improved GCS following appropriate treatment emphasize the value of early recognition and organism-specific management.