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## INTRODUCTION:

Central nervous system (CNS) infection carries high risk of morbidity and mortality. Infection by multiple organisms is considered uncommon even in HIV patient.

## CASE REPORT:

We present a case of a 28-year-old intravenous drug user presented with headache, vomiting, fever and altered consciousness. He was tested positive for HIV with CD4 <35 cells/ $\mu$ L. Radiological findings of leptomeningeal enhancement and multiple intra-axial lesions involving bilateral basal ganglia, pons and cerebral hemispheres with cerebral oedema causing hydrocephalus raised suspicion of tuberculous meningitis and cerebral toxoplasmosis. Empiric treatment was initiated with clindamycin, pyrimethamine, and folinic acid for toxoplasmosis, along with corticosteroids and a 4-drug anti-TB regimen for tuberculous meningitis. Probable diagnosis of cerebral toxoplasmosis was supported by borderline toxoplasma IgM and strongly positive IgG with level more than 400IU/mL. Burr hole drainage of brain abscess revealed PCR positive for Mycobacterium tuberculosis and confirmed diagnosis of tuberculous meningitis. Treatment was further complicated by poor oral tolerance, and hepatotoxicity, requiring multiple anti-TB regimen adjustments including temporary switch to intravenous agents. Reassessment CT brain after 3 weeks showed smaller intra-axial lesion. Initiation of antiretroviral therapy was withheld until the fourth week to reduce the risk of immune reconstitution inflammatory syndrome. Despite this successful treatment, patient was still having residual weakness requiring rehabilitation.

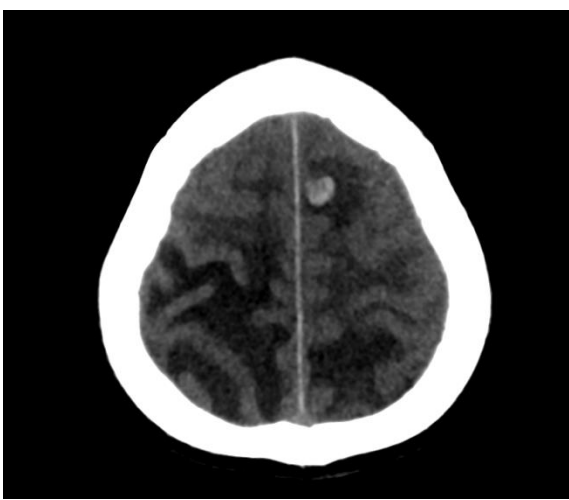


Figure 1. Image of initial CT brain done showing largest lesion located at left parietal lobe with significant perilesional oedema.



Figure 2. Image of initial CT brain done showing Right lateral and third ventricles are effaced. Temporal horn of the left lateral ventricle is prominent in keeping with early hydrocephalus.

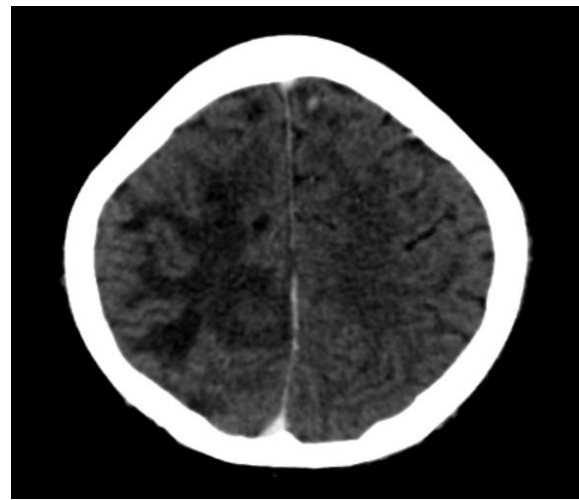


Figure 3. Image of follow up CT brain showing smaller lesion at left parietal lobe.



Figure 4. Image of follow up CT brain showing improving cerebral oedema with minimal midline shift.

## DISCUSSION:

This case highlights a rare presentation of HIV infection, where the initial manifestation was a concurrent CNS infection. Complexity in managing multiple CNS infection in a newly diagnosed HIV infection requires multidisciplinary approach, including early antimicrobial therapy and neurosurgical intervention which proved to improve the patient outcome.