

ABSTRACT

Introduction: Toxoplasmosis is a common protozoan infection worldwide, with approximately one third of the population harboring latent infection. Cerebral toxoplasmosis, particularly prevalent in retroviral co-infected patients, poses significant morbidity and mortality risks, especially in low-income countries like Sri Lanka. We report a case of cerebral toxoplasmosis in a 46-year-old male with a retroviral infection, highlighting its diagnosis, management, and outcome.

Case Presentation: The patient presented with progressive weakness in the right upper and lower limbs over two weeks, along with a tendency to fall to the right side during walking and memory impairment. Past medical history revealed unexplained weight loss, decreased appetite, and low-grade fever over the past year. Physical examination revealed cachexia and increased tone in the right limbs with exaggerated reflexes. Fundus examination was normal. Initial investigations ruled out tuberculosis and other common infections. Neuroimaging using MRI brain showed multiple ring-enhancing lesions with eccentric target signs and surrounding edema, consistent with cerebral toxoplasmosis. The patient tested positive for retroviral infection.

Discussion: Cerebral toxoplasmosis is an opportunistic infection caused by *Toxoplasma gondii* and primarily affects individuals with compromised immune system, such as those with low CD4 cell counts due to retroviral infections. The typical presentation includes focal neurological deficits, reflecting the localization of the parasite in the brain.

Diagnosis of cerebral toxoplasmosis is often based on clinical criteria, serological evidence, and characteristic imaging findings. While brain biopsy remains the gold standard, it is reserved for cases where other diagnostic methods are inconclusive. Treatment of cerebral toxoplasmosis involves a combination of pyrimethamine, sulfadiazine, and leucovorin for six weeks. Prompt initiation of antiretroviral therapy is crucial in retroviral-positive patients with opportunistic infections. In our case, the patient showed significant clinical improvement within two weeks of initiating therapy.

Conclusion: Cerebral toxoplasmosis is a serious complication in retroviral-positive patients and requires early recognition and appropriate management. Prompt initiation of specific therapy and antiretroviral treatment can lead to favorable outcomes, as observed in this case. Clinicians should be vigilant for neurological symptoms in retroviral-positive patients, especially in regions with a high prevalence of toxoplasmosis. Further research and awareness are necessary to improve early detection and optimize treatment strategies for this challenging co-infection