

ABSTRACT

Tuberculosis remains a significant global health concern, especially in the context of HIV infection, where the risk of acquiring and progressing tuberculosis is substantially increased. This case report presents the clinical manifestation, diagnosis, and management of a middle-aged male patient with a tuberculoma of the brain, leading to the diagnosis of retroviral infection.

CASE PRESENTATION

A 42-year-old male presented with progressive weakness of the left upper and lower limbs, along with facial asymmetry, dysphagia, and dysarthria. Further evaluation revealed weight loss, loss of appetite, and a history of high-risk sexual behavior. Neurological examination showed left-side upper and lower limb weakness, exaggerated reflexes, and right-sided mouth deviation. Diagnostic imaging, including CT and MRI of the brain, revealed multiple ring-enhancing focal lesions consistent with tuberculoma.

DISCUSSION

Cerebrospinal fluid analysis demonstrated elevated protein levels and decreased sugar levels, supporting the diagnosis of tuberculous meningitis. Despite negative acid-fast bacilli staining, both Gene Xpert and TB culture confirmed the presence of *Mycobacterium tuberculosis* in the cerebrospinal fluid. Additionally, screening and confirmatory tests for retroviral infection were positive. The patient received

a combination of anti-tuberculosis drugs and adjunctive glucocorticoids for the tuberculoma, with anti-retroviral treatment initiated after two weeks. Notably, collaboration between tuberculosis and HIV care services played a crucial role in managing the patient effectively.

CONCLUSION

This case highlights the challenges in diagnosing central nervous system tuberculosis, especially in HIV-infected individuals, where atypical findings are common. Early initiation of anti-retroviral therapy is crucial for optimal outcomes in patients with HIV-associated tuberculosis. The successful management of tuberculoma involves a combination of anti-tuberculosis treatment, adjunctive glucocorticoids, and possible surgical intervention for obstructive or compressive features. Consideration of tuberculosis as a differential diagnosis in patients with neurological manifestations, particularly in the context of HIV infection, is essential for timely and appropriate management. Further research is needed to enhance our understanding of CNS tuberculosis in HIV-positive patients and to develop more effective diagnostic and therapeutic approaches.