

Cerebral Toxoplasmosis in HIV/AIDS: A case report

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Summary

This is a case of HIV infection with cerebral toxoplasmosis. Cerebral toxoplasmosis is an AIDS-related infection and is one of the causes of CNS mass lesions in AIDS. A 36-year-old male was admitted at Komfo Anokye Teaching Hospital (KATH) for a week. He had focal seizures for which he was treated as an "epileptic" with herbal preparations. A computerized tomography (CT) head scan revealed the characteristic scan findings in CNS toxoplasmosis.

Key-words: *Toxoplasmosis, HIV/AIDS, Seizures, CT scan.*

Résumé

C'est un cas d'infection VIH avec toxoplasmose cérébrale. La toxoplasmose cérébrale est une infection liée au SIDA et une des causes de tumeur du système nerveux central dans le SIDA. Un homme âgé de 36 ans a été hospitalisé à KATH pendant une semaine. Il avait des crises focales pour lesquelles il a été traité comme un "épileptique" avec des herbes médicinales. Un scanner de la tête a révélé les images caractéristiques de toxoplasmose du système nerveux central.

Introduction

Epilepsy is a common disease but some causes of epilepsy are rare. *Toxoplasmosis gondii* is a parasite of cosmopolitan distribution. Members of the cat family are the definitive hosts for *T. gondii*¹. The disease can be divided into four clinical patterns², the acquired disease, the disease in the immunologically compromised patient, congenital infection and ocular disease. Serious illness is unusual except among persons with deficient cell-mediated immunity and infants in utero.

In the immunocompetent patient, the clinical course is benign and self-limited³. Symptoms if present, usually resolve within a few months. Chronic infection ensues in all infected persons after resolution of the acute phase due to asymptomatic persistence of *T gondii* (cyst forms). Reactivation of the chronic infection with resultant toxoplasmosis occurs almost exclusively in the immunocompromised host⁴. Toxoplasmosis in AIDS patients commonly involves the brain, lungs and the eyes⁵.

Toxoplasmic encephalitis is the most common presentation of toxoplasmosis in AIDS patients⁶. Characteristically, there is a subacute onset with focal neurological signs in 89% of cases⁷, although the clinical presentation

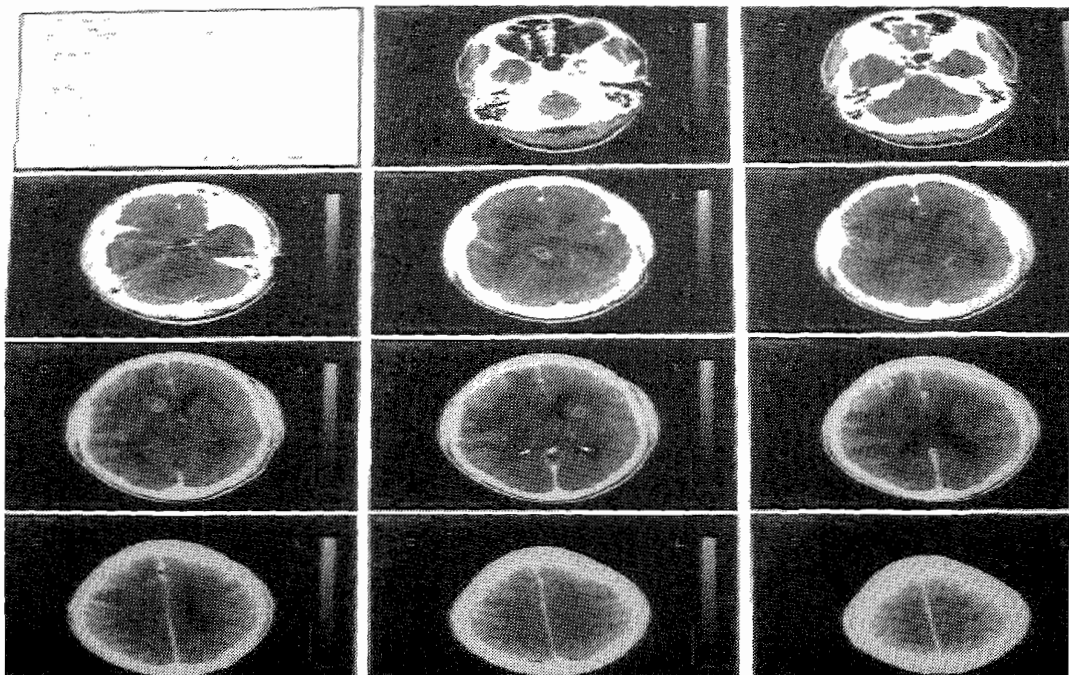


Figure 1 A cranial CT revealed multiple ring-enhanced lesions in the basal ganglia and deep grey matter, the characteristic findings in central nervous system toxoplasmosis

may be more abrupt with seizures. Other presentations of toxoplasmic encephalitis include altered mental state, weakness and cranial nerve disturbances³. Patients suffering from AIDS should be examined by CT brain scan if cerebral toxoplasmosis is suspected⁸. Even with early treatment, the prognosis in such patients is poor.

Case

A 36-year-old man presented with headache, neck pain and lethargy for 3 weeks. He had focal seizures with jerking of the left upper limb and twitching of the left half of the face four weeks after onset of illness, for which he received treatment at a herbal centre in Togo.

On examination, he looked unwell with moderately pale conjunctiva but no jaundice or lymphadenopathy. He had a Glasgow coma scale score of 15. He had a left upper motor neuron facial palsy and a left hemiparesis (power of 4). There was hyporeflexia of the left limbs and the plantar response was extensor. Examination of the optic fundi was normal. The other systems were essentially normal.

The CSF was clear with a protein concentration of 1.11g/L and a glucose concentration of 4.0 mmol/L. CSF bacteriology revealed 2/mm³ lymphocytes. There was no bacterial growth after 48 hours of incubation. After counselling and by the patient's permission, blood was taken for HIV screening. He tested positive to anti HIV 1 and 2 antibodies.

The focal seizures were aborted with 10 mg of Diazepam intravenously (when required). He was also given empirical treatment for toxoplasmosis with Pyrimethamine, 100 mg loading dose and then 25 mg/day and Sulfadiazine, 2 mg twice daily. On the fifth day of admission, he had a generalized tonic-clonic seizure whilst eating. He aspirated lumps of fufu and died of asphyxia.

Discussion

Focal seizures are usually due to a structural lesion in the brain such as a stroke, abscess or tumour. Occasionally, metabolic lesions especially hyperglycemia and hyponatremia can cause focal lesions and focal partial seizures. Neurological illnesses are the initial manifestation of AIDS in 7% to 20% of patients⁹ and are also among the most frequent and devastating complications of HIV infection and AIDS. The peripheral and central nervous systems may be affected. These neurological disorders include HIV dementia, primary CNS lymphoma, and toxo-

plasmosis¹⁰. New-onset seizures are frequent manifestations of central nervous system disorders in patients with HIV infection. Seizures are more common in the advanced stages of the disease, although they may occur early in the course of the illness¹¹. Computerised tomography head scans should be done when feasible to confirm or rule out toxoplasmic encephalitis.

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