Diffuse cerebral toxoplasmosis: an unusual case report

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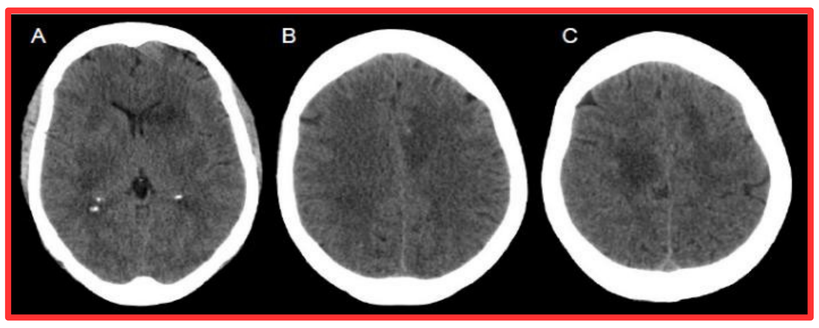
Background

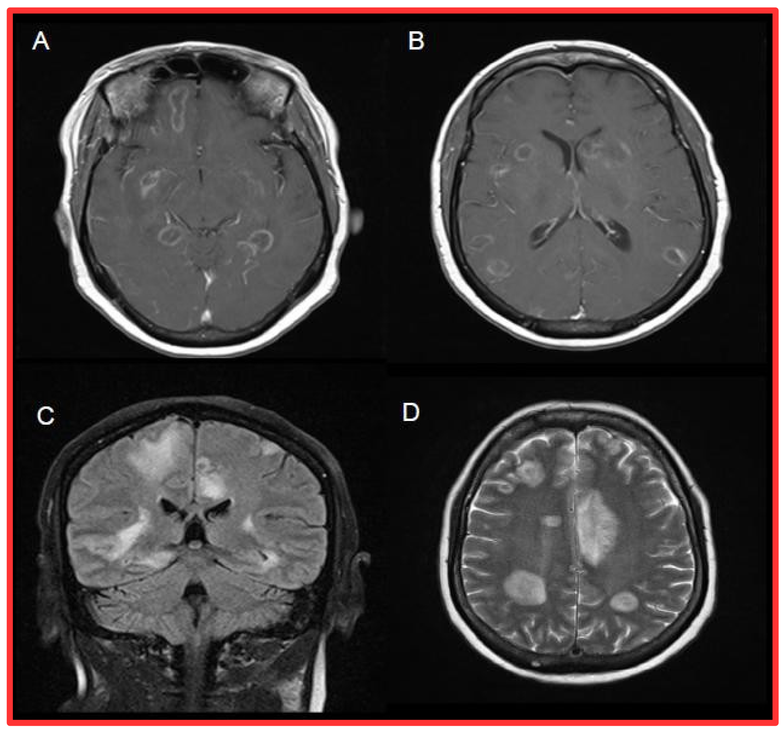
Central nervous system (CNS) toxoplasmosis is a major opportunistic infection in patients with human immunodeficiency virus (HIV) infection.
There are only few cases in literature of CNS involvement during the course of undifferentiated connective diseases. The diffuse, non- necrotic, "encephalitic" form of cerebral toxoplasmosis has been uniquely associated with HIV-related immunosuppresion and, to our knowledge, has rarely been reported in patients treated with micophenolate mofetil (MMF) treatment

Case Report

A 48 year old female with five years history of undifferentiated connective diseases predominant pulmonary involvement, polymyositis, heart involvement, treated with steroid 50 mg/daily and MMF 1000 mg x 2/die from five years.
She was admitted in Neurological Department with high fever (39°C) and altered state of consciousness.
Neurological examination discolosed beyond the consciousness impairment, with Glasgow Coma Scale (GCS) of 5/15, neck stiffness, left hemiparesis with bilateral Babinski sign. Brain CT Scan showed hypodense areas surrounding marked white matter with edema.
Electroencephalography (EEG) showed diffuse disorganised activity (delta-theta) with epileptic discharges.

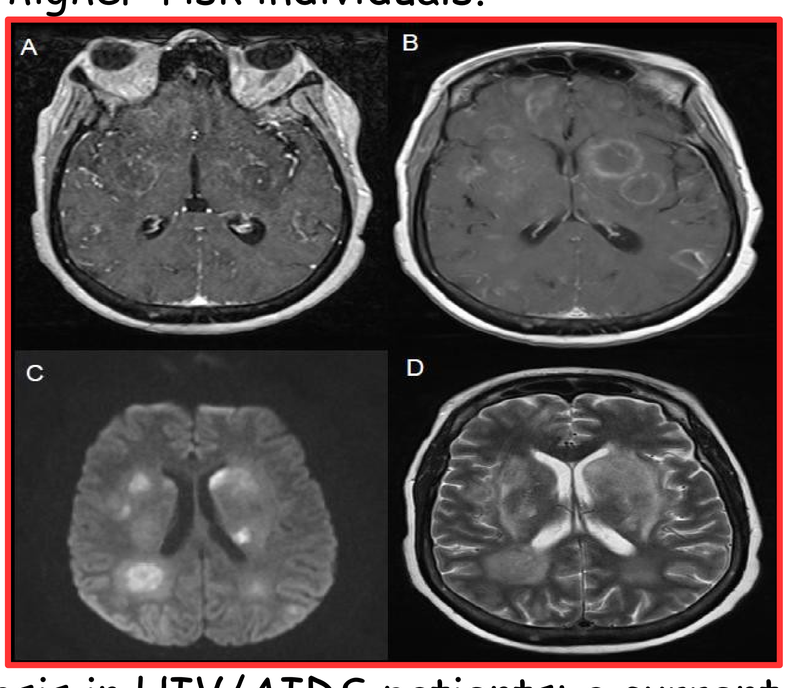


Routine laboratory investigations showed Hb-12.5 g/dl, white total blood cell count- 7970 cells/cu.mm, platelet count-335,000 cells/cu.mm.
Further investigations showed raised neutrophils count (9,22x10^3/mcL), positive Toxo IgG antibodies, negative serum HIV and increased C Reactive protein (0,9 mg/dL).
A lumbar puncture was performed. The CSF analysis showed 10 cell/mm3 (90% mononuclear lymphocytes); protein content of 87,1 mg/ dL, glucose concentration of 0 mg/dL (corrispondent serum level was 91 mg/dL).
The CSF Gram stain, India ink, cryptococcal antigen and culture bacterial, mycobacterial and mycetes investigations were negative. Blood and CSF examinations were negative for syphilis. CSF polymerase chain reaction (PCR) for neurotrophic virus were also negative.
The first brain MRI showed a diffuse T1-weighted images - contrast-enhanced target sign.
Therefore specific therapy for toxoplasmosis was administered: pyrimethamine 50 mg daily sulfadiazine 1,000 mg 4 times per day, folinic acid 2cp/die and MMF was stopped. The patient's condition worsened duringthe following three weeks.
Death occurs 2 weeks later after the onset of symptoms.



Conclusion

CNS toxcoplasmosis occurring during the treatment of autoimmune neurologic illnesses or rheumatologic illnesses with MMF is unfrequent, even if possible.
Despite treatment, mortality in patients receiving immunosuppression remains high, with reported mortality rates ranging from 40% to 60%, which is higher than the mortality rate for the AIDS population (13%–31%).
The use of trimethoprim/sulfamethoxazole (TMP-SMX) prophylaxis to prevent life-threatening opportunistic infections in individuals receiving immunosuppression for treatment of autoimmune disease has previously been recommended for higher-risk individuals.



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