CRYPTOCOCCOSIS MASKING AS FULMINANT BACTERIAL SEPSIS: A MANIFESTATION OF UNMASKING IRIS?

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Background: A 54 yo man presented with headache, fevers and unsteadiness, in the context of newly diagnosed advanced HIV infection (CD4 cell count 23/µL, viral load 700,000/mL), and initiation of antiretroviral therapy (tenofovir, emtricitabine and dolutegravir) six days earlier. MRI brain was normal. Lumbar puncture showed opening pressure of 7 cm, normal cerebrospinal fluid (CSF) glucose and protein, a mild pleocytosis (3 polymorphs/µL, 3 lymphocytes/µL), and positive cryptococcal antigen (1:10). Tests for tuberculosis and other CNS pathogens were negative. *Cryptococcus neoformans* was cultured from both blood and CSF. The patient was diagnosed with disseminated cryptococcosis, and treated with liposomal amphotericin-B and 5-flucytosine.

The patient's condition deteriorated dramatically over the subsequent 24 hours; he became hypotensive, developed increasing respiratory distress and was admitted to the intensive care unit following a generalized seizure. His ICU course was complicated by rapidly progressive multi-organ dysfunction, including respiratory failure requiring intubation, renal failure requiring renal replacement therapy, myopericarditis with widespread ECG changes and global systolic dysfunction, abnormal liver function and altered level of consciousness. He was treated empirically with broad-spectrum antibiotics but blood, bronchial washings and other cultures were negative and no alternative bacterial infection was identified. Due of the possibility of severe immune reconstitution inflammatory syndrome (IRIS) he was given corticosteroids and antiretroviral treatment was withheld. Ultimately the patient slowly improved and antiretroviral therapy was reinstated, uneventfully.

Conclusion: This case of cryptococcal infection is striking because of its severity and rapidity of progression. In the pre-antiretroviral therapy era, there were only isolated reports of disseminated cryptococcosis presenting with septic shock and multiorgan dysfunction resembling fulminant bacterial sepsis. Given the close relationship with initiation of antiretroviral therapy, we believe this case may be an example of a rare and especially severe manifestation of unmasking cryptococcal IRIS in a patient with advanced, late diagnosed HIV infection.