Cryptococcus: Not Always An Indolent Pathogen!

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Introduction

Cryptococcus is an invasive fungus that causes infection in immunocompromised patients (1,2,3). HIV is the major predisposing factor with more than 100,000 HIV related deaths per year. Approximately 13 percent of individuals with HIV in the United States are unaware of their diagnosis (4). Suspicion of cryptococcal meningitis should remain high in patients presenting with altered mental status and malaise in the setting of newly diagnosed HIV/AIDS. We present a case of a patient with newly diagnosed AIDS in which the rate of neurological decline due to cryptococcal meningitis precluded treatment efficacy.

Case Presentation

A 47-year-old male with a history of IV drug use disorder presented with one day of blurred vision and malaise. Vitals were 142/103, 89 bpm, 98.4 F, RR 17, 98% RA . Other than general assessment of a poorly kempt individual, the physical exam including neurological exam was completely unremarkable. Due to his history of IV drug use, an HIV test was ordered, which was positive with CD4 count at 9 cells/mm^3. Brain MRI was ordered due to reports of blurred vision, which showed hyperintensities in the periventricular and subcortical white matter. The patient suddenly became confused and hypoxic (77% on RA) on the second day of admission, requiring intubation and ICU transfer. Imaging revealed multifocal pneumonia and broad-spectrum antibiotics were initiated. Blood cultures and antigen were positive for *Cryptococcus neoformans*; Amphotericin B and flucytosine were initiated. He continued to decline, and family decided to transition to comfort care. The patient died shortly after.

Case (Continued)

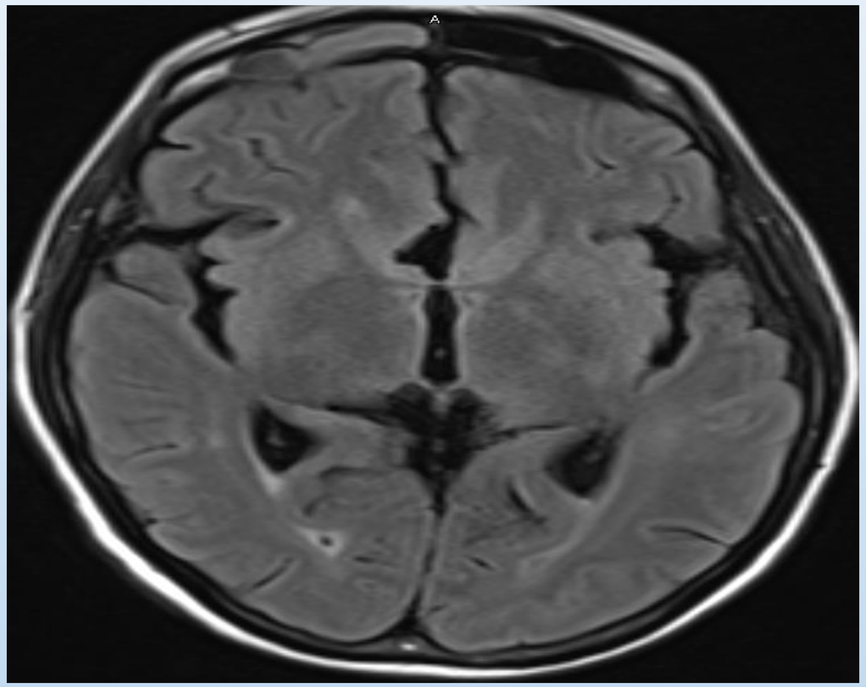

Figure 1: MRI showing patchy and confluent hyperintensity in the periventricular and subcortical white matter.

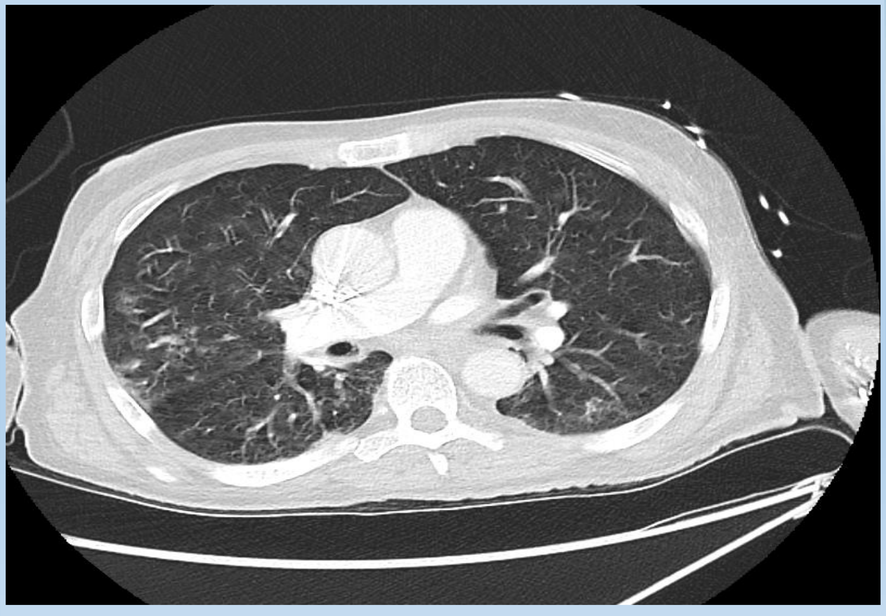

Figure 2: CT showing infiltrates bilaterally, in the bases compatible with multifocal pneumonia.

Discussion

While most patients with cryptococcal meningitis and pneumonia present with symptoms that progress indolently over several weeks, our patient presented with rapid deterioration of neurological and respiratory status (5). Even more concerning, his initial complaints were non-specific which may have led to less urgency. Due to continued exposure from IV drug use disorder, an HIV test was ordered. Unfortunately, by the time this test resulted, the patient had begun to rapidly decline.

Conclusion

Providers should be aware of the incidence and prevalence of HIV in their community, and when history and physical exam suggest untreated HIV, the threshold to order Cryptococcal antigen and imaging should be low. In immunocompromised patients, Cryptococcus can be aggressive rather than indolent.

References

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