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HIV-Positive Patient, with Concurrent COVID-19 and Cryptococcus Infections, a Case Report

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Background: HIV positive individuals are more prone to secondary and opportunistic infections. This study investigated a case of HIV-positive diagnosed with COVID-19, who infected with Cryptococcus. **Methods:** The patient was a 53-year-old woman with COVID-19 symptoms. COVID-19 Real-time PCR, hepatitis C virus (HCV) and HIV tests were performed. Lumbar puncture (LP) was done and cerebrospinal fluid (CSF) glucose and protein evaluated. Temporal artery colour-Doppler sonography and Skull XR was performed. **Results:** Severe tension-type -generalized headache, nausea, and photophobia were the main physical symptoms. COVID-19 was found to be positive. Right axis deviation (RAD) and left bundle branch block (LBBB) were diagnosed. HIV-positive and blood impaired circulation were reported. White blood cells on 6 months prior to referral were 30×10^3 cells/ μl , but during hospitalization it was decreased to 8.2×10^3 cells/ μl (2021-9-9). Finally, it was increased to 14.7×10^3 cells/ μl (2021-9-28). There was no change in the amount of C-reactive protein (CRP) (15 mg/dl). CSF test showed that glucose and protein were 15 and 240 g/dL, respectively. Results of direct observation with slide, India ink stain and blood culture confirmed Cryptococcus. Finally, Cryptococcal meningitis was diagnosed. Patient stabilized with amphotericin B, fluorocytosine, fluconazole, acyclovir and vancomycin, co-trimoxazole, dexamethasone, pethidine, liposomal amphotericin, depakine, ondansetron, lorazepam and had been discharged from hospital. **Conclusion:** Fungi are one of the most opportunistic infections that can be cause disease severity in individuals with immunodeficiency disease such as HIV, especially in patients with COVID-19. Prompt diagnosis and treatment should be performed immediately in these patients.

Keywords: HIV positive, COVID-19, Cryptococcus, Cryptococcal Meningitis