Preliminary Study of Nine HIV-associated Central Nervous System Complications from Imaging Analysis

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Abstract

The central nervous system (CNS) is preferentially vulnerable to HIV infection with respect of chronic exposure to HIV in the brain as well as combination infection of HIV and opportunistic pathogens that can lead to neurocognitive impairment. In order to shed light of characterizations of HIV-associated CNS complications, 9 HIV-associated CNS complications were analyzed by computed tomography (CT) and magnetic resonance imaging (MRI). In the 9 cases, characterizations of HIV-associated encephalitis, HIV-associated encephalitis of toxoplasma infection, cytomegalovirus infection, cryptococcosis infection and herpes simplex infection, HIV-associated white matter complication, HIV-associated cerebral infarction, HIV-associated cerebral encephalitis of syphilis infection, and HIV-associated cerebral glioma were detected by imaging. These HIV-associated CNS complications not only respectively showed few common features of non-HIV-associated CNS complications, but exhibited specific traits. HIV-associated CNS complications showed typical clinical and radiological presentations are sufficient to establish the diagnosis.

Keywords: AIDS; HIV-associated central nervous system complications; Imaging

This manuscript is under-going peer review process

Academic Editor: Dr. Carmen Figueroa

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