

HIV and Suicide: HIV Induces Structural And Functional Abnormalities In White And Grey Matters In The Brain Of Infected People End With Suicide

Editorial

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Suicide is a prevalent occurrence among those living with HIV/AIDS. Suicide prevalence estimates, on the other hand, differ amongst studies. In a systematic study, the prevalence of suicidal behavior among HIV/AIDS was calculated. The estimates of the prevalence of suicidal thoughts, attempts, and plans from various studies included in this meta-analysis were pooled using a random-effects model, which was stratified by continent or region and screening instrument. The prevalence of suicide was gathered from 36 studies (n=32,818) from 15 countries. Suicidal ideation, plans, and attempts were estimated to be present in 20.9 percent, 8.1 percent, and 7.5 percent of the population, respectively [2].

HIV is linked to problems with cognition and brain function. Marijuana usage is common among HIV patients, although the effects of marijuana on resting brain function remain unknown. Functional connectivity, or brain activity that is correlated between regions over time, can be used to assess brain function. Disruptions in such connection are becoming more common in neuropsychiatric diseases. During resting state, we looked at the synergistic effects of HIV and marijuana use on functional whole-brain network organization. Our sample consisted of 78 adults with varying HIV and marijuana statuses (19 with co-occurring HIV and marijuana use, 20 HIV-only, 17 marijuana-only, and 22 controls). We used eight graph theoretical measures to look at differences in local and long-range brain network organization: transitivity, local efficiency, within-module degree, modularity, global efficiency, strength, betweenness, and participation coefficient. The co-occurring HIV and marijuana use and control groups had similar local and long-range connections. The HIV-only and marijuana-only groups, on the other hand, were both linked to abnormalities in brain network organization. These findings imply that marijuana usage in HIV patients may help to normalize abnormalities in brain network organization. However, more research is needed to identify whether this normalization indicates a favorable or negative effect of marijuana on HIV-infected people's cognitive functioning [5].

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Approximately, 40 million people worldwide are infected with the human immunodeficiency virus (HIV), with over 1.5 million new infections every year [6]. HIV-associated neurocognitive impairment affects 15–50% of those living with the virus [3]. When the virus infects the central nervous system and triggers a neuroinflammatory cascade, HAND can develop [7]. Even if the condition is under control, the latent virus reservoir can produce ongoing inflammation, which can lead to neuronal damage [4]. HAND causes changes in brain structure and function, including diffuse gray and white matter volume loss, as well as abnormalities in brain function [1].

Our perception

It is highly possible that HIV impacts on brain are exerted to disrupt logical circuits in the brain as it interferes with white and grey matters in the brain. This may facilitate its existence and escaping from the counteracting actions mediated by immune system. Cognition is also disturbed, and the decision towards may be taken without rational thinking and responsibility. This may be recruited by social impulses and pain intensity. Taken together, our hypothesis states” *HIV induces changes in structure and function in the brain of infected persons lead to abnormalities in cognition and committing suicide*”

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