EPV1074

Cognitive function and cannabis use in first episodes of psychosis

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Introduction: The association between cannabis use and cognitive functioning in individuals experiencing a first episode of psychosis (FEP) is inconsistent, with some studies reporting deterioration (Bogaty et al. J Psychiatr Res 2018; 99:22-32), others indicating improved performance (Rodríguez-Sánchez et al. Schizophr Res 2010; 124:142-151), and some finding no difference.
Objectives: This study aims to evaluate the effect of cannabis use on cognitive functioning among individuals diagnosed with FEP.
Methods: A cross-sectional study was conducted on FEP patients enrolled in the ITPCan Program (Santander, Spain) between January 2020 and July 2024. A total of 207 participants (57 cannabis users and 145 non-users) with a FEP diagnosis were included. A descriptive-univariate analysis was performed on clinical, analytical, and cognitive variables. A Student's t-test compared baseline cognitive performance between cannabis users and non-users, while a multivariate general linear model (GLM) assessed differences related to cannabis consumption, adjusting for sex, age, and educational level. Statistical analyses were performed using SPSS.
Results: Out of the 207 FEP participants, 53.6% were women, with an average age of 36.8 years. Cannabis users comprised 28.1% of the group, and present at baseline a lower mean age at intake (27 years; $p < 0.001$). Cannabis users exhibited significantly higher scores in mania and positive psychotic symptoms. Cognitive assessments, completed by 148 patients (39 users and 108 non-users), revealed that cannabis users performed better than non-users on "processing speed" task; however, after adjusting for sex, age, and educational level, these differences were attributed to educational level and sex.
Conclusions: In consonance with some previous studies (Sánchez-Gutiérrez et al. Eur Psychiatry 2020; 63(1)), cannabis use does not appear to be a determining factor in cognitive performance in early psychosis.

Disclosure of Interest: None Declared

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Neuropsychiatric Effects of HIV and Toxoplasma Gondii Encephalitis: A Case Study

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Introduction: HIV infection can lead to neurological and psychiatric disorders by affecting the central nervous system. Toxoplasma gondii can cause encephalitis in immunocompromised individuals, particularly damaging brain regions such as the frontal cortex and basal ganglia. These neuroanatomical disruptions can influence dopaminergic and serotonergic neurotransmitter pathways, resulting in severe neuropsychiatric symptoms like behavioral disinhibition, personality changes, and psychotic manifestations (Vidal JE. J Int Assoc Provid AIDS Care 2019; 18:2325958219867315).
Objectives: This case seeks to demonstrate the neuropsychiatric effects of HIV and Toxoplasma gondii infections on neuronal function and behavior, emphasizing the importance of continuous assessment and integrated treatment approaches.
Methods: A 49-year-old male patient, with no known medical history, developed Toxoplasma gondii encephalitis after being diagnosed with HIV. Following discharge from the infectious disease ward, the patient exhibited increased irritability, impulsivity, hypersexuality, visual hallucinations, disorganized speech, and risky behaviors, along with cognitive dysfunction and social norm violations. The patient's symptoms partially improved with a treatment regimen of 15 mg olanzapine and 1000 mg valproic acid. However, the patient's ongoing course, parkinsonism symptoms emerged, prompting the discontinuation of valproic acid and the consideration of quetiapine. The patient's follow-up treatment is ongoing.
Results: HIV and Toxoplasma gondii disrupt neuronal function through inflammatory responses and microglial activation in the central nervous system. HIV does not directly damage neurons, but inflammation from cytokines released by microglia can lead to neurodegenerative conditions. Dopaminergic dysfunction is linked to psychotic symptoms, while serotonergic disruptions contribute to depression and anxiety. Frontal lobe and basal ganglia damage impair executive functions (planning, decision-making, impulse control), causing increased impulsivity, risky behaviors, emotional dysregulation, irritability, lack of empathy, behavioral disinhibition, hypersexuality, and cognitive dysfunction. These changes are tied to structural damage in the frontal cortex, necessitating long-term follow-up and comprehensive treatment. Diagnostic imaging often shows white matter lesions, basal ganglia damage, and frontal cortex atrophy. Treatment involves antiretroviral therapy, low-dose antipsychotics, mood stabilizers for managing symptoms (Bartolomé Del Pino LE *et al.* Actas Esp Psiquiatr 2024; 52(2):149-60).
Conclusions: HIV and Toxoplasma gondii infections induce significant central nervous system impairment, leading to neuropsychiatric disorders. This case illustrates their impact on neurotransmitter systems, manifesting as psychosis, cognitive dysfunction, and behavioral disturbances. Continued monitoring and comprehensive treatment are essential.

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Relationships between parameters of EEG and glutamate-ergic system activity in patients with depressive-delusional disorders

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