

Results: Although there were differences between volumes in the first analyzes with Student's t test, they were not statistically significant.

Age and gender variables, which were determined by the literature to have an effect on volume measurements, were re-evaluated with the ANCOVA test. When the effects of age and gender variables were removed in the evaluation, the right hippocampus volume was found to be significantly reduced in the AUD group compared to the control group ($F=5.26$, $p=0.03$). Again, no significant difference was observed in the two groups in terms of areas other than the volume of the right hippocampus. Pearson correlation analysis was used to evaluate the relationship between scale scores, duration of alcohol use and amount taken, and volumetric measurements, but no statistically significant relationship was found.

Conclusions: Different findings have been reported in the literature regarding the examined region volumes. Our study found volumetric changes consistent with most previous studies. For more generalizable results, studies with a large number of participants are needed.

Disclosure of Interest: None Declared

EPV0616

Heavy and Chronic Cannabis Use Impact on Human Emotions: BOLD-fMRI Study

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Introduction: Long term cannabis use has been expanding drastically over the last two decades and has become a major health issue worldwide. Recent studies demonstrate that brain complications in adults with cannabis use are associated with cognitive and emotional impairments, but little is known about the relationship between structural alterations and behavioral manifestations. Therefore, studying the relationship between alterations of emotional system, in parallel with structural degenerative phenomena is very critical.

Objectives: Hence, the aim of this study is to demonstrate such alterations by making use of appropriate paradigms during BOLD-fMRI scans. Positive, negative and neutral emotions were examined, in relations with DTI and functional connectivity.

Methods: 11 cannabis addicted patients volunteered for the study. Volunteers were fully healthy. However, any additional comorbidity was a strict criterion of exclusion, and a healthy general state was an indispensable criterion of inclusion. Additionally, it was excluded any patient that have any additional substance use such as tobacco, alcohol, cocaine, etc. And strict use of cannabis was a must.

All patients underwent blood and urine assessments to ensure the selection criteria.

All patients underwent BOLD-fMRI and anatomical MRI using both motor and emotional paradigm.

The motor task consisted of rest alternating with finger tapping. The emotional task included 3 conditions. Positive, neutral and negative were each alternating with silent mental counting. The

fMRI data was processed using SPM12 package. A sample of 12 age-matched controls was also included.

Results: The present results are based on analysis of behavioral and BOLD-fMRI data of 11 patients and similar age-matched controls. Analysis of behavioral data showed an alteration of emotional abilities in cannabis addicted patients compared to controls. Analysis of fMRI data revealed significant changes of activation within a large cortical network including prefrontal cortex and parietal cortex, and that emotional responses and BOLD signal were inversely correlated.

Conclusions: These findings demonstrate that the brain of cannabis addicted patients undergoes and emotional alterations that parallel silent structural degenerative phenomena. Although the causal mechanisms are still to be investigated, the fact that functional impairments can be detected in emotional, cognitive and motor domains calls for the development of preventive measures using neurobehavioral tools for this population of patient, and even in at risk users.

Disclosure of Interest: None Declared

Neuroscience in Psychiatry

EPV0617

Cognitive functions in people with mental disorders: focus on self-reflection, insight and mindwandering

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Introduction: People with mental disorders may present impairments in cognitive and metacognitive functions. Self-reflection is the ability to reflect on oneself (specifically on one's behavior, emotions, and thoughts) and insight is the awareness of one's internal experience. Mindwandering (MW) is defined as the tendency to divert attention from current reality without a clearly defined intention. It can be spontaneous or deliberate. Several studies have investigated these alterations in patients with schizophrenia (SZ), while less is known for people with substance use disorder (SUD).

Objectives: The aim of the present study was to explore self-reflection, insight and MW in a group of patients with SZ and SUD.

Methods: The Self-reflection and Insight Scale (SRIS) and the spontaneous (MW-S) and deliberate (MW-D) mindwandering scales were administered to 25 patients with SZ, 21 patients with SUD, and 21 healthy controls (HC). Linear regressions were performed to evaluate the associations between the variables under study.

Results: Preliminary data showed that SZ and SUD patients presented lower SRIS and MW values than HC. Examining MW in detail, participants with SZ reported higher scores than MW-D, while in people with SUD, MW-D scores were higher than MW-S scores. Linear regressions revealed that MW-D was negatively associated with self-reflection in SUD; moreover, insight scores were negatively associated with MW-S in SZ.

Conclusions: Our preliminary results confirm the importance of acting on the elements of metacognition in patients with mental disorders to improve the general outcome of the disease. A comprehensive therapeutic approach should include psychotherapeutic and social interventions aimed at increasing attention and introspection.

Disclosure of Interest: None Declared

EPV0618

The Impact of ECT on mood symptoms: 50 patients were assessed using Hamilton Depression rating scale at the start, mid point and end of ECT. These results showed a clear reduction in depression symptoms as ECT progressed.

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Introduction: ECT is a recognised, safe and effective treatment for severe/psychotic depression. Neuro and functional brain imaging has indicated what specific changes take place with ECT and at what stage. This study aims to explore the specific impact on depression and mood symptoms as ECT progresses, using longer version of Hamilton Depression Rating Scale at start, mid point and end point of ECT.

Patient themselves are often keen advocates of ECT (if they found it effective and tolerable).

Objectives: specifically to consider the impact of ECT on mood and depressive symptoms as ECT progresses.

This is to reconsider and reflect on if ECT is effective and also to consider at what stage of treatment ECT appears to have the greatest impact or brings about the greatest change

All patients having ECT will be assessed and clerked as per routine but will also be assessed using Hamilton Depression Rating Scale (17 item version), an observer rated scale to assess severity of depressive symptoms. This will be used with all ECT patients, regardless of diagnosis or indication for ECT. Basic demographic details, diagnosis, co morbidities and previous ECT recorded.

Findings

Methods: Patients are ideally assessed before ECT has started to give a baseline/true reflection of their depressive illness and then at the mid point (around session 6) and then at the end of treatment (ideally session 12).

Hamilton depression Rating scale (HDRS) longer version is used - 17 questions with scores out of 40. Higher scores indicate more severe depression. HDRS is an observer rated scale, with numerous questions about biological symptoms of depression and is a well established assessment tool. The same rater was used to try to rule out observer bias.

Results: Patients had a significant drop in HDRS scores as ECT progressed, with the biggest drop being between the start of ECT and the midpoint. This trend continued from mid to end point but with a less steep gradient.

mean HDRS scores at start were 24/40 (indicating severe depression).

Mean HDRS at midpoint 12/40 (indicating mild depression)

Mean HDRS at end of ECT 5/40 (indicating normal range/no depression)

Conclusions: ECT works for mood symptoms associated with depression. All patients having ECT had a reduction in their HDRS score as ECT progressed, most marked in the 1st half but this trend continued in 2nd half (but at slower rate). This was the case even for patients who were not having ECT for mood symptoms (eg for aggression or psychosis).

Disclosure of Interest: None Declared

EPV0619

Human endogenous retroviruses and autism spectrum disorder: Brief review of recent literature

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Introduction: Human endogenous retroviruses (HERVs) are genetic elements resulting from ancestral infection of germline cells. HERVs have been associated with multiple complex disorders, including neurodevelopment disorders, namely autism spectrum disorder (ASD).

Objectives: In this review, we aim to explore the relationship between endogenous retroviruses and autism spectrum disorder.

Methods: A non-systematic review of literature published in the Pubmed database in the last ten years was performed. A combination of the search terms “autism spectrum disorder”, “ASD”, “endogenous retrovirus”, “human endogenous retrovirus”, “ERV” and “HERV” was used. Articles were selected based on title and abstract review.

Results: Preclinical and human studies suggest that the abnormal expression of endogenous retroviruses can represent a biological trait of neurodevelopment disorders in affected individuals and their parents. The precise epigenetic processes that underpin this relationship remain elusive. Nonetheless, HERVs play various roles, modulate host immune response and may affect human embryogenesis. All of these factors can participate in the interplay among genetic vulnerability, environmental risk factors, and maternal immune activation that contribute for the development of ASD.

Conclusions: There is a recent, mounting body of evidence linking HERVs and ASD. Whether HERVs behave as a cofactor for the development of ASD or an epiphenomenon of neurodevelopmental disorders remains unclear. Further research is needed to assess if there is causality and evaluate the potential for HERVs to serve as biomarkers for ASD.

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