and its related lesions in localization and number, through visual rating scales semi-automated and fully automated volumetric methods of specific software packages as part of deep machine learning.
**Methods:** We have included 50 T2/FLAIR MRI brain scanned images, 30 patients (both genders) with late-onset vascular depression and 20 controls. In all subjects, T2/fluid-attenuated inversion recovery (FLAIR) sequences of the brain were collected during a single session using a 3 Tesla scanner (Siemens Skyra Medical Systems). FLAIR-white matter hyperintense lesions were identified and quantified using a local thresholding segmentation technique using specific software. FLAIR lesion volume and number was reported for the whole brain and for each hemisphere separately, without distinction between deep and periventricular.
**Results:** There is statistical significance in total number and total regional volume of interest in brains of patients with late-onset vascular depression compared to controls ($p<0.05$). Median number of white matter hyperintensities was 14 per patient, and white matter hyperintensities median volume was 721 mm3. No difference was found between right and left hemisphere in terms of number ($p>0.05$) and volume ($p>0.05$) of white matter hyperintensities. Statistical significance was faound in volume and localisation of lesions in the brain ($p<0.05$).

**Image 1:**

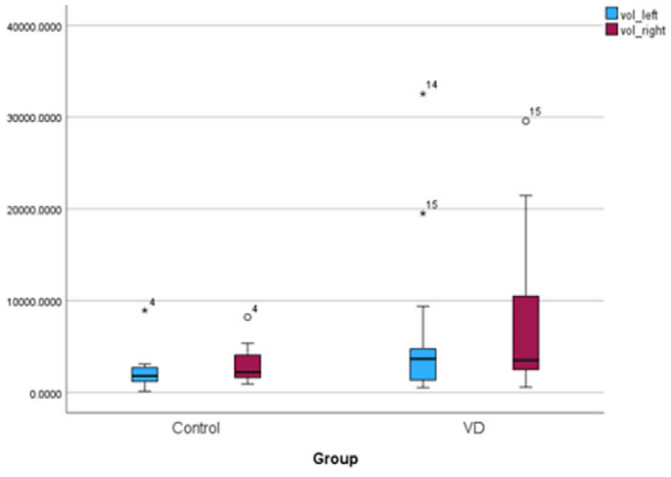



**Image 2:**

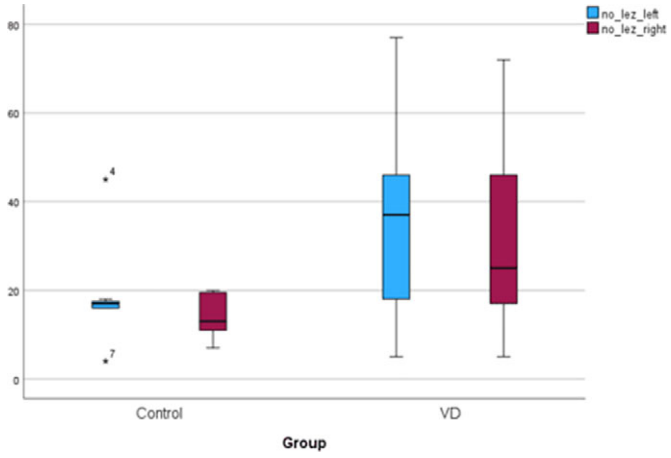
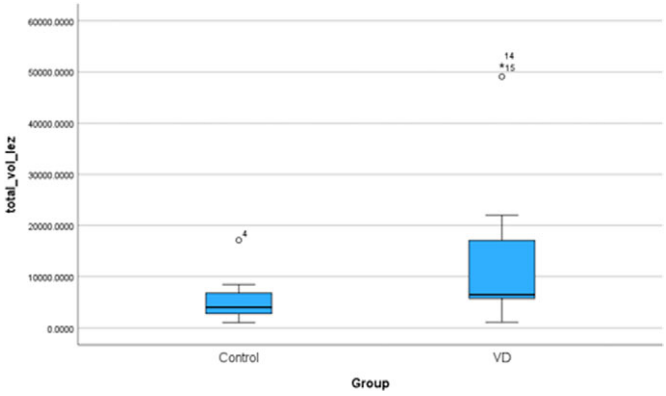



**Image 3:**




**Conclusions:** Higher burden of white matter hyperintensities in patients with vascular depression could be associated with progression of clinical depressive symptomatology as well as with severity of brain damage.

**Disclosure of Interest:** None Declared

## Neuroscience in Psychiatry

### EPP472

### Association Between Neuronal Pentraxin 2, ADHD Symptoms, and Executive Functioning in Adults with ADHD: A case-control study

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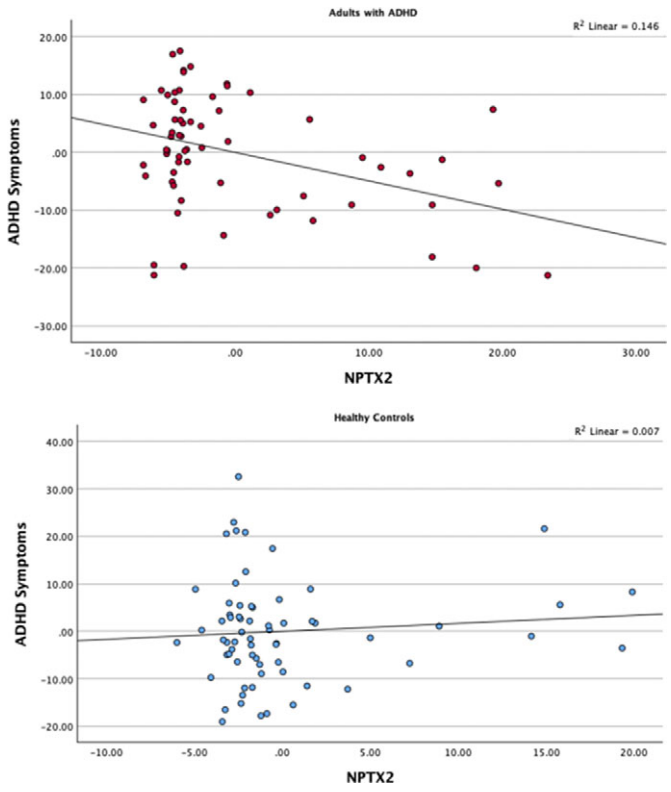
**Introduction:** Neuronal pentraxins (NPTXs), particularly NPTX2, play a key role in glutamate modulation and the stabilization of AMPA receptors, influencing synaptic plasticity. Studies have shown a positive correlation between NPTX2 levels and neurocognitive function in neurodegenerative diseases, and it has been proposed as a potential biomarker for synaptic degeneration (San José *et al.* J Neural Transm 2022; 129 207-230). However, the role of NPTX2 in the etiology of ADHD has not been explored in human samples.
**Objectives:** This study aims to investigate the relationship between NPTX2 levels and ADHD symptoms in adults with ADHD, while also exploring the potential impact of NPTX2 on executive functions, which are frequently impaired in this population.
**Methods:** Adults with ADHD who were medication-free and had no comorbid psychiatric diagnoses, along with a similar control group with no psychiatric diagnoses, were included in the study. All participants were diagnostically assessed using the Structured Clinical Interview for DSM-5 Disorders-Clinician Version. Participants completed measurements related to both ADHD and comorbid conditions. In addition, participants underwent a battery of neuropsychological tests, including the Stroop Test, Cancellation Test, Serial Digit Learning Test, Wisconsin Card Sorting Test, and Judgment of Line Orientation Test. The serum samples obtained after centrifugation were stored at -80°C

until the time of analysis, at which point NPTX2 levels were measured using the ELISA method. Informed consent was obtained from all participants, who voluntarily agreed to participate. The study was approved by the Local Ethics Committee of Selçuk University under decision number 2023/495.

**Results:** The study included 79 adults with ADHD and 70 healthy controls. Among the participants, 57.7% (n=86) were female, with a mean age of 23.50 ± 4.37 years. Both groups were comparable in terms of age, gender, total years of education, and body mass index. Individuals with ADHD showed higher levels of ADHD- and comorbidity-related symptoms, as well as poorer executive function profiles, compared to healthy controls. NPTX2 levels were significantly elevated in the ADHD group. Significant positive correlations between NPTX2 levels and clinical and neurocognitive data were observed in the ADHD group, but not in the control group. Finally, linear regression analyses conducted separately for each group revealed significant F values, showing that in adults with ADHD, NPTX2 levels were significantly associated with ADHD symptoms independent of age, gender, years of education, and anxiety/depression scores, whereas this relationship was not observed in healthy controls (Image 1).

**Image 1:**




**Conclusions:** These results highlight the need for further research into the role of NPTX2 and other neuronal pentraxins in ADHD and suggest that NPTX2 may serve as a biological marker for this disorder.

**Disclosure of Interest:** None Declared

## EPP473

## Anti-NMDA Receptor Encephalitis following Herpes Simplex Encephalitis presenting as Mania with Psychotic Features: Case Report

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**Introduction:** Herpes Simplex Encephalitis (HSE) and anti-NMDA receptor autoimmune encephalitis (ANMDARE) are severe neurological conditions that can lead to significant psychiatric symptoms. While these conditions commonly cause cognitive and behavioral disturbances, mania with psychotic symptoms is an uncommon manifestation. Understanding this rare presentation is crucial for accurate diagnosis and management.

**Objectives:** To describe a case of mania with psychotic symptoms in a 33-year-old woman approximately one month after Herpes Simplex Encephalitis (HSE), further complicated by anti-NMDA receptor autoimmune encephalitis.

**Methods:** We conducted a detailed review of the clinical process and heteroanamnesis from family reports. A non-systematic literature review was performed using the terms "encephalitis," "mania," "psychosis," "herpes simplex," and "anti-NMDA" in the PubMed®/MEDLINE® database.

**Results:** A 33-year-old woman, seven months postpartum with no prior psychiatric history, presented with psychomotor agitation, distractibility, elevated mood, verbose speech, tachypsychia, impulsivity, verbal perseveration, insomnia, and mystical and persecutory delusions, including auditory-verbal hallucinations, starting 15 days after discharge from hospitalization for HSE. Her subsequent hospitalization revealed severe and fluctuating behavioral changes, significant memory deficits, and spatial-temporal disorientation. Neuroimaging showed atrophy of the left temporal lobe, ipsilateral insula, and notable involvement of the left hippocampus. Cerebrospinal fluid analysis detected anti-NMDA receptor antibodies, leading to treatment with corticosteroids and immunoglobulins. The patient was stabilized on clozapine 150 mg/day, valproate 1000 mg/day, clonazepam 1 mg/day, and monthly injectable risperidone 100 mg.

**Conclusions: Discussion:** HSE is a major cause of death in sporadic encephalitis cases, with a 12% relapse rate linked to viral reactivation and the development of anti-NMDA receptor encephalitis. ANMDARE, caused by anti-NMDA receptor IgG antibodies targeting the NR1 subunit, affects about 25% of HSE patients within three months. Psychiatric affective syndromes have been described both as possible initial symptoms of HSE and as long-term sequelae, but the underlying mechanisms remain not fully understood.

**Disclosure of Interest:** None Declared