

hallmarks of HD. Anti-psychotic drug olanzapine, which has minor side-effects on EPS, was found to be highly effective on our HD patients, alleviating the behavioral and psychiatric symptoms of the disease.

Conclusions: In conclusion, HD should be one of the differential diagnoses if patients with psychiatric complaints have accompanying neurological findings such as movement disorders and impaired memory, and great attention should be paid to the extra-pyramidal system (EPS) sensitivity of the chosen treatment regime when treating the HD patients,

Keywords: Huntington's Disease; bipolar disorder; Depression; Movement Disorder

EPP0797

A surface-based morphometry study of risk and resilience markers associated with supramarginal thickness in schizophrenia

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Introduction: Conventional structural neuroimaging methods can identify changes in cortical thickness but cannot relate these changes to specific cortical layers due to a lack of sensitivity. However, several indirect measures sensitive to changes specifically occurring in supragranular cortical layers were developed recently (github.com/kwagstyl/schizophrenia_gyralsulcal).

Objectives: The aim was to assess the ability of these novel measures to detect cortical layers thickness characteristics potentially associated with risk or resilience to developing schizophrenia.

Methods: 43 first-episode schizophrenia (FES) male patients, 29 non-converted individuals at ultra-high risk of psychosis (ncUHR, mean follow-up period – 6.5 years), and 43 matched healthy controls (HC) underwent structural MRI at 3T Philips scanner. Images were processed via FreeSurfer and MATLAB to derive two markers specific to supragranular thickness change: gyral-sulcal thickness differences (GSTD) and gyral-sulcal intrinsic curvature differences on pial surface (GSCD).

Results: GSCD measures were increased in temporal, parietal and occipital cortices, whereas both GSTD and GSCD were increased in the right frontal cortex in FES compared to HC. No GSTD or GSCD were changed in ncUHR compared to HC, and GSCD was decreased in the frontal cortex compared to FES.

Conclusions: Our findings from the indirect measures indicate a potential predominance of supragranular thinning in FES and suggest that a supragranular thinning in the right frontal lobe might be associated with precipitating risk and/or illness effects of schizophrenia. At the same time, no clear supragranular markers directly associated with resilience or risk mechanisms were identified. The work was supported by RFBR grant 20-013-00748.

Keywords: schizophrenia; Supragranular thinning; Ultra-high risk of psychosis; Risk and resilience

EPP0800

Neuropsychiatric symptoms as first manifestation of olfactory groove meningioma - importance of neuroimaging evaluation

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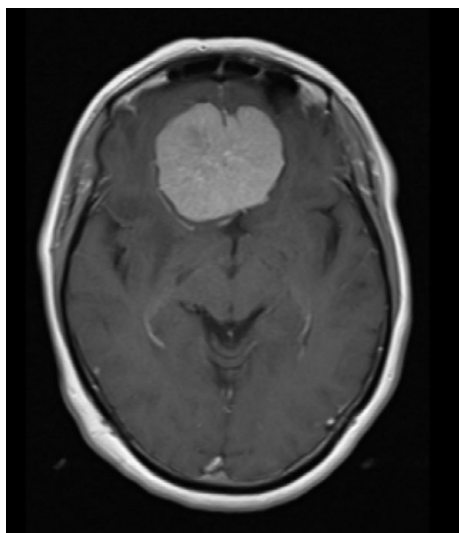
Introduction: Neuropsychiatric symptoms may be the first and only manifestation of brain tumours, while classic neurological symptoms and signs may be minimal or absent at first. These patients will often receive psychiatric treatments for prolonged periods before correct diagnosis.

Objectives: To report the case of a patient with olfactory groove meningioma presenting with neuropsychiatric symptoms as a basis for discussion.

Methods: Retrospective review of clinical notes, neuroimaging results and house photos. Literature review.

Results: A 66-year-old woman was brought by police to the psychiatric emergency department. Her neighbours had notified authorities of a bad smell, and police found the house was loaded with garbage. The patient reported depressive symptoms in the last 6 months, including apathy, anhedonia, social isolation, decreased appetite and insomnia; loss of basic skills such as cooking or cleaning; she also reported dizziness and two episodes of urinary and faecal incontinence in public. The patient had a history of being medicated for depression between 2000 and 2006. Currently she was taking only alprazolam 1 mg daily. During evaluation she was conscious, oriented and cooperative, with evident hypomimia, psychomotor inhibition and indifferent attitude. Cranial nerve function was preserved except for anosmia. Cranial CT and MRI showed a solid extra-axial tumour of 5.2x3.5x4.9 centimetres compatible with meningioma of the olfactory groove, and she was referred to Neurosurgery for surgical intervention.





Conclusions: This case illustrates the importance of a thorough organic evaluation, including neuroimaging, in the differential diagnosis of patients with atypical symptoms before making a psychiatric diagnosis and instituting treatment.

Keywords: Neuropsychiatric; Neuroimaging; meningioma

EPP0802

Functional connectivity between brain regions underlying executive control and language in schizophrenia patients with history of auditory verbal hallucination

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Introduction: Schizophrenia patients with auditory verbal hallucinations (AVH) demonstrate impaired functional connectivity (FC) between brain regions, involved in executive functions and language. However, as most studies compare patients to healthy controls, the specificity of these findings either for schizophrenia in general or for AVH is unclear.

Objectives: We aimed to compare whole-brain resting-state FC of main language brain regions between schizophrenia patients with and without history of AVH and healthy controls.

Methods: Schizophrenia male patients with (n=31; mean age 29.8±11.6) or without history of AVH (n=16; 29±12.4) and 39 healthy male controls (30±8.9) underwent resting-state fMRI on 3T Philips scanner. No between-group differences in age, illness duration, and severity of clinical symptoms except AVH were revealed. Regions of interest (ROIs) were taken from the independent fMRI study with conventional language localizer and included left inferior frontal gyrus (l_IFG) and superior temporal gyri (STG) bilaterally. Whole-brain FC of each ROI was compared between groups (ANCOVA; p<.005 voxelwise; p(FDR)<.017 clusterwise, corrected for number of ROIs) with post hoc tests.

Results: Decreased FC between each STG (left and right) and anterior cingulate cortex (ACC) was revealed in all patients, compared to healthy controls. Patients with history of AVH, compared to other groups, showed decreased FC between l_IFG and ACC.

Conclusions: Disrupted fronto-temporal FC is non-specific for AVH and characterizes all schizophrenia patients. Patients with history of AVH have impaired FC between the l_IFG, underlying language production, and ACC, involved in differentiation between language production and comprehension. The study was supported by RFBR grant 18-013-01214.

Keywords: auditory verbal hallucinations; resting-state fMRI; functional connectivity; schizophrenia

EPP0803

Classification of first-episode schizophrenia patients, individuals at ultra-high risk for psychosis, and healthy controls using structural mri, eeg, and machine learning

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