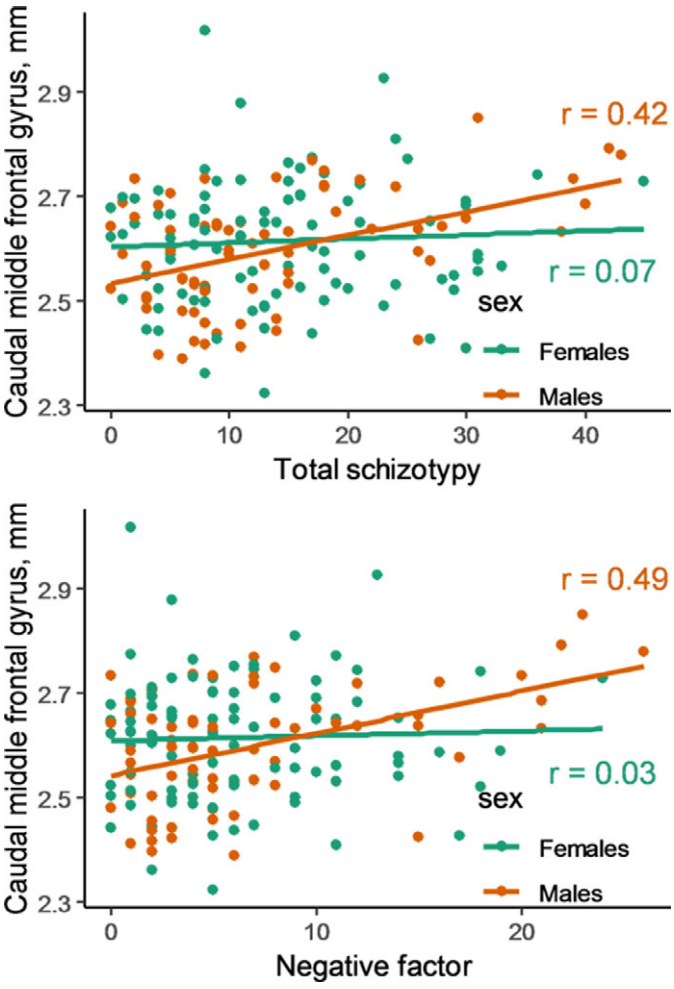
4 factors scores including age and sex as covariates. The same analysis was performed for subcortical volumes including intracranial volume as additional covariate.

Results: In male group we revealed a positive correlation between greater thickness of the left caudal middle frontal gyrus and higher total schizotypy (r=0.42, p_{unc}=0.0003, 95% CI [0.21–0.60]) and negative factor of schizotypy (r=0.49, p_{unc}<0.0001, 95% CI [0.28–0.65]) (Image). No correlations survived correction for multiple comparisons in female sample. There were no differences in age, caudal middle frontal gyrus thickness, total schizotypy or negative factor of schizotypy scores between male and female subgroups.

Image:



Conclusions: The results suggest that the association of dorsolateral prefrontal cortex (DLPFC) and levels of schizotypy is gender specific. We showed that total and negative schizotypy positively correlated with thicker DLPFC in male but not in female sample. The present data are inverse to findings of prefrontal cortical thinning observed in schizophrenia. Such correlations suggest that thicker cortex could be a potential compensatory mechanism or could reflect alterations in trajectory of cortical thickness reductions across the lifespan.

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Disclosure of Interest: None Declared

EPV0612

Decreased axial diffusivity in the superior longitudinal fasciculus correlates with fronto-parietal functional connectivity in psychotic patients with persistent delusions

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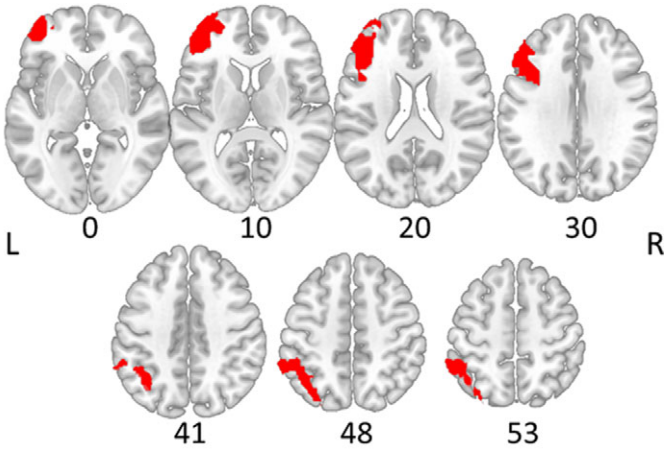
Introduction: There is growing evidence to suggest that delusions in schizophrenia-spectrum disorders are associated with altered brain connectivity. Disruptions in long association fibers, such as the superior longitudinal fasciculus, are among the most consistent findings in psychosis. However, functional connectivity (FC) correlates of such structural alterations and their implications in delusional symptoms remains unclear.

Objectives: The study used a hypothesis-driven approach and aimed at exploring structural connectivity (SC) disruptions of the left superior longitudinal fasciculus (part with parietal terminations, SLFP) and their FC correlates in a group of psychotic patients with persistent delusions across diagnostic categories within the schizophrenia-spectrum.

Methods: Sixteen right-handed patients (23.1-53.8 years, mean age 39.6±8.5, 44% females) with delusional disorder (DD, n=10) and schizophrenia (SCZ, n=6), presenting with persistent delusions, and 16 matched healthy controls (23.0-56.4 years, mean age 38.9±11.1, 44%females) underwent diffusion-weighted 3T MRI (DW-MRI), while patients additionally underwent resting-state 3T fMRI (rsfMRI). DW-MRI data were processed via FreeSurfer6.0 and TRACULA to derive axial (AD), radial (RD) diffusivities and fractional anisotropy (FA) for left SLFP. rsfMRI data were processed with SPM12 and Conn v19c to calculate ROI-to-ROI FC between lateral prefrontal and inferior parietal components of the frontoparietal network (FPCN) according to Yeo atlas (Yeo *et al.* J Neurophysiol. 2011; 106(3) 1125-65), which is sought to represent cortical projections of the SLFP (Image). Partial rank-based correlation analysis (with age and sex as covariates, ppcor v1.1, R v4.2.1) was used to explore the associations between SC and FC measures involving the SLFP, PANSS and BABS scores.

Results: Compared to healthy controls, patients showed decreased AD in left SLFP [F(1, 28)=14.9, p=0.0006; Cohen's $d = -1.3$, 95% CI: −2.1 to −0.5]. No RD or FA alterations were found. We revealed a correlation between AD in left SLFP and fronto-parietal FC within the FPN ($r = 0.58$, $p = 0.031$) in patients. Correlation between FC and PANSS total score ($r = -0.54$, $p = 0.045$) did not survived correction for multiple comparisons. No other correlations between SC or FC, chlorpromazine equivalents and clinical scores were revealed.

Image:



Lateral components of the fronto-parietal network according to Yeo functional connectivity atlas
Top: lateral prefrontal
Bottom: inferior parietal

Conclusions: The findings suggest that the structural connectivity disruptions of the SLFP may mediate FC strength within the FPN in patients with persistent delusions. However the limited sample size and the lack of correlations between connectivity measures and clinical scores do not allow to conclude definitely whether the revealed structural-functional connectivity pattern underlies delusional symptoms, which should be elucidated via further research.
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Disclosure of Interest: None Declared

EPV0613

Structural brain MRI studies in autism spectrum disorder

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Introduction: Autism spectrum disorder (ASD) refers to a group of conditions characterized by quantitative differences in the morphology of the cortex and subcortex. Analyzing brain morphology qualitatively provides complementary information about possible underlying neurobiology. Studies of neuroradiological findings in ASD have produced mixed results in a large and independent sample.

Objectives: A small cerebellum associated with pons hypoplasia, or a posterior fossa cyst, may indicate causal developmental mechanisms. Therefore, neuroradiological findings could help elucidate the neurodevelopmental processes associated with ASD.
MRI "minor abnormalities" also included dilatation of the Virchow-Robin gaps, an enlarged cisterna magna, pineal gland cysts, and arachnid or choroidal cysts not included in specified categories.
Methods: There were anomalies in the corpus callosum (hypoplasia), cerebellum, brain stem, abnormal white matter signal intensity, macrocephaly, ventriculomegaly, abnormal myelination patterns, ventricular system size, Arnold Chiari I malformation, cortical dysplasia and atrophy, hippocampal malformations, and pituitary glands. These anomalies were referred to as "major abnormal findings".
Results: The most common minor abnormality is the mega cisterna magna. Some authors propose a minor abnormality such as this as a marker for brain dysgenesis. According to Zimmer and colleagues, enlargements of the cisterna magna are generally accompanied by cerebellar hypoplasia and ventriculomegaly, as well as lower performance on speech tasks (verbal and semantic fluency) common among individuals with autism spectrum disorders. The relationship between the presence of mega cisterna magna and language difficulties could be studied further in a subsequent study. Abnormal dilation of the cisterna magna is thought to be related to alterations in the cerebellar volumes.
Conclusions: Clinical MRI assessments may be helpful in the context of diagnoses and are potentially valuable for further studies of the pathogenesis of autism. The potential utility of routine brain MRI is in discovering early morphologic biomarkers for ASD.

Disclosure of Interest: None Declared

EPV0615

Brain Reward System And Its Volumetric Investigations In Alcohol Addiction

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Introduction: Alcohol use disorder (AUD) is a diagnosis that includes both addiction and abuse concepts that entered our lives with the DSM-5. The prevalence of AUD is 8.1% in men and 1.7% in women in Türkiye, and it is getting more and more common. Biopsychosocial factors play a role in the etiology of AUD.
Objectives: The brain reward system, which includes many cortical and subcortical structures, plays an active role in the initiation and maintenance of alcohol dependence. In this study, we aimed to reveal the structural changes in alcohol dependence.
Methods: 15 cases with AUD and 17 healthy controls were compared in terms of total white matter, total gray matter, nucleus accumbens, amygdala and hippocampus volumes. AUDIT, MAST and alcohol addiction severity scale were administered to all participants. Magnetic resonance imaging of all participants was performed. Then, the relevant regions were painted cross-sectionally and volume measurements were made. The case group was evaluated for the diagnosis of AUD with SCID-V. Volume averages were evaluated with Student's t test. ANCOVA was used to remove confounding factors and re-evaluate the difference between volumes.