YRP.06

Schneiderian psychotic symptoms in bipolar patients

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Background: Bipolar disorder is accompanied frequently by psychotic symptoms, including those psychotic symptoms typically associated with schizophrenia, such as Schneider's first rank symptoms. However, it is not known which patients are more prone to develop such symptoms. The aim of the present survey was to examine FRSs in bipolar I patients and their relationship to gender.

Method: The sample consisted of 103 consecutive inpatients who met DSM IV criteria for bipolar disorder, manic or mixed. FRSs were rated with the SAPS (Scale for the Assessment of Positive Symptoms). Interaction between FRSs and gender and FRSs and age was assessed using logistic regression.

Results: Presence of FRSs was found in 22.3% patients diagnosed of manic episode. The FRSs were more frequent in men than in women (14%; χ^2= 4.312; df=1; p=0.038).

Conclusions: These results confirm previous work that FRSs are not specific to schizophrenia, but also that male sex is associated with this type of psychopathology in bipolar disorder. The association between FRSs, and male gender in bipolar patients suggests that a psychosis dimension of the schizophrenia type could be independently related to age-dependent developmental factors.

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Rheumatoid arthritis and schizophrenia: an exclusion of association

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There is wide evidence for a decreased risk of rheumatoid arthritis in patients with schizophrenia. Nevertheless, very few studies have looked at the risk of schizophrenia in a group of patients with rheumatoid arthritis.

We prospectively investigated, with the SCL-90R, 220 consecutive outpatients with rheumatoid arthritis and 196 consecutive outpatients with various medical conditions, half of them suffering from psoriatic arthritis (a medical condition close to rheumatoid arthritis).

The SCL-90R appears to be a valuable tool to distinguish patients with schizophrenia from the outpatients of our sample, the former having more "paranoid ideation" (p=0.004) and more "psychoticism" (p<0.001) than the latter. The "paranoid ideation" dimension was significantly lower (25% decrease) in the sample of patients with rheumatoid arthritis compared to the combined control group (p=0.005), ratings under the median value being more frequent in the former group (p=0.025). Confounding factors might not explain this difference according to the regression logistic analysis performed.

This data represents further evidence for a decreased risk of schizophrenia (assessed in a quantitative way) in a population of subjects with rheumatoid arthritis.

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Dysfunction of the brain reward system in addiction

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Objective: Drugs of abuse stimulate dopamine release in the ventral striatum and reinforce drug consumption. Stimuli that have regularly been paired with drug intake can become conditioned cues and elicit dopamine release and drug-seeking behavior.

Methods: Ten alcohol-dependent patients were examined after two to four weeks of supervised abstinence. Alcohol craving was assessed with the Obsessive Compulsive Drinking Scale (OCDS). Dopamine D2 receptor availability was measured dynamically with an ECAT EXACT PET scanner after administration of 194 +/- 27 MBq [F18]-DMFP. Striatal ROIs were placed after stereotactic normalisation to the Talairach space and the distribution volume ratio was calculated at equilibrium. For fMRI, standardized visual alcohol-associated cues and neutral control stimuli were presented in a block design and analysed with SPM99.

Results: Functional brain imaging showed that alcohol-associated cues versus neutral stimuli activated the orbitofrontal cortex. Obsessive craving for alcohol was significantly correlated with cue-induced activation of the OFC and striatal dopamine D2 receptor availability. Cue-induced activation of the OFC was positively correlated with striatal D2 receptor availability.

Conclusion: Obsessive alcohol craving was associated with cue-induced activation of the OFC and dopamine D2 receptor availability in the striatum. Comparable brain areas were implicated in obsessive–compulsive disorder. Functional brain imaging may help to identify a group of patients with a high relapse risk.

YRP.09

Activation differences in sufficient and insufficient learning – an fMRI study of procedural motor learning

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Cerebral activation might be related to the performance of a motor sequence during encoding or retrieval. The relevance of performance of differences in activation during encoding and retrieval has rarely been examined using functional magnetic resonance imaging (fMRI).

Consequently, 10 healthy students were examined with fMRI while performing a motor learning and retrieval task consisting of 15 sequential finger movements.

During learning, the frontal cortex, the supplementary motor area, the precuneus, the parietal lobe and the cerebellum were activated bilaterally.

In the group of superior learners the right frontal cortex, the right parietal lobe, the SMA and the precuneus were activated during retrieval,. In the group of inferior learners the left frontal cortex and parietal lobe were additionally activated.

Additional activation of left cortical areas during encoding and retrieval of the motor sequence in subjects with inferior performance might reflect increased retrieval effort.