scores predicted lower intensity ratings accounting for about 10% of the variance in both conditions. EPQ-Extraversion and EPQ-Neuroticism explained 15% of the variance in TTR but in opposite directions. Higher EPQ-Neuroticism scores predicted lower SCR amplitude accounting for 8% of the variance.

Conclusions: Measures of emotional reactivity show distinct patterns depending on experimental condition and personality characteristics.

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The study of brain function in first-episode schizophrenia by functional MRI

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Background and aims: To explore the characteristics of cerebral activation during the performance of WCST in first-episode, drug-naive schizophrenic patients by functional magnetic resonance imaging,- Wisconsin Card Sorting Test (WCST) and Color Card Sorting Test (CCST).

Methods: Twenty healthy adults and twenty schizophrenic patients underwent fMRI with a 1.5T MR imager with gradient echo-EPI sequence during the performance of Wisconsin Card Sorting Test (WCST) and Color Card Sorting Test (CCST). The functional images of two groups were analyzed with analysis software. The active volume of interested brain areas and the performance of WCST were compared between healthy group and patient group. Results:(1) The performance of WCST in first-episode drug-naive schizophrenic group were significantly lower than the performance in healthy group(P<0.01) . (2) The images subtracted the functional images of CCST from those of WCST in healthy group suggested that activations were mainly localized in the bilateral frontal lobe, especially the dorsolateral prefrontal cortex,- posterior parietal cortices and anterior cingulate gyrus.(3)The patients group showed less activations in left dorsolateral prefrontal cortex(P<0.01), left anterior cingulated (P<0.05),but more activations in left posterior parietal cortices(P<0.05).

Conclusion: The dorsolateral prefrontal cortex and anterior cingulate of first-episode schizophrenic patients are hypofunction,which maybe involved in the executive function disorder in schizophrenia. The hyperactivity of posterior parietal cortices maybe can compensate the hypofrontality in a certain extent.

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Pharmacogenetics of weight gain and obesity following clozapine treatment

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Weight gain is a major problem associated with long-term antipsychotic drug treatment. Clozapine is known to induce particularly profound weight gain. Although the mechanism of it is not clearly understood, the 5-HT2C receptor and leptin are implicated in its development. The present study examined the effects of 5-HT2C and leptin gene polymorphisms on weight change and obesity in the patients on clozapine.

107 patients (mean age 39.5±10.1 y.) meeting ICD-10 criteria for schizophrenia or schizoaffective disorder receiving clozapine took part in this study. The patient assessment included an interview, measures of weight, height, waist-hip ratio, waist circumference, body mass index (BMI, kg/m2); blood samples were taken for random blood glucose and genetic testing for 5-HT2C and leptin gene.

Central obesity was present in 102 patients as defined by increased waist circumference and obesity in 67 patients as defined by BMI>30. Type II diabetes was present in 8 patients and type I diabetes in one. In 93 patients (62M, 31F) we assessed change in BMI and weight during treatment which was 2.6±4.2kg/m2 and 7.43±12.35 kg, respectively.

There was no association between 759C/T 5-HT2C receptor and -2548A/G leptin gene polymorphisms with BMI or weight.

No association between 759C/T 5-HT2C receptor and -2548A/G leptin gene polymorphisms was found with change of BMI or waist circumference.

We found no significant association between 759C/T 5-HT2C receptor and -2548A/G leptin gene polymorphisms and changes in BMI or weight in the patients treated with clozapine.

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MEG investigation of abnormal semantic priming in schizophrenia

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Schizophrenia is associated with profound communication disorders resulting in a major social handicap. Hardy-Baylé and colleagues hypothesized that such impairments are related to a failure to process contextual integration. Previous studies based on event related potentials recordings (ERP) during semantic priming tasks have shown that schizophrenic patients have abnormal modulation of the N400 component. Supposedly, this electrical characteristic reflects an abnormal use of semantic context during word processing. However, the neural substratum underlying this pathological phenomenon remains poorly understood. To enrich knowledge inherited from ERP studies, we used magneto-encephalography (MEG) to determine the peculiarities (in anatomical and temporal terms) of the neural generators involved in semantic context integration in schizophrenia. The current study consisted in recording ERP and MEG signals during a French word-pairs lexical decision task (LDT). Subjects had to decide whether "target words" belonged to the lexicon or not, those words being preceded by word primes. The semantic relatedness between primes and targets varied (presence or absence) across two experimental conditions. Data obtained from a group of treated schizophrenic patients are compared to those from a healthy population. We report the preliminary results of schizophrenic subjects demonstrating that semantic priming elicits magnetic signals in the 300 to 500ms time window. Single subject's analysis of ERP and MEG profiles shows that the latter offers a different and complementary access to the brain response associated with LTD. Thus, MEG technique is suitable for investigating schizophrenic semantic priming abnormalities.

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Working memory and executive function: relation to psychiatric candidate genes

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