Schizophrenia

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Clinical symptomatology and facial emotion recognition in schizophrenia: Which relationship?

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Introduction Patients with schizophrenia show impairments in social cognitive abilities, such as recognizing facial emotions. However, the relationships between specific deficits of emotion recognition and with clusters of psychotic remain unclear.
Objectives To explore whether facial emotion recognition was associated with severity of symptoms and to which presentation of psychotic symptoms.
Methods Facial emotion recognition (FER) were evaluated in 58 patients with stable schizophrenia with a newly validated FER task constructed from photographs of the face of a famous Tunisian actress representing the Ekman's six basic emotions (happiness, anger, disgust, sadness, fear, and surprise). Symptomatology evaluation comprised the Positive and Negative Syndrome Scale (PANSS), the Calgary Depression Scale for Schizophrenia (CDSS) and the Clinical Global Impressions Scale Improvement and severity (CGI).
Results Patients who failed to identify anger had significantly higher scores in hyperactivity item ($P < 0.0001$). The patients who had a difficulty to identify sadness had more grandiosity ($P \leq 0.002$). The impairment in happiness recognition was correlated with hallucination ($P = 0.007$) and delusion ($P = 0.024$) items. Incapacity to identify fear was associated to lack of judgment and insight ($P = 0.004$).
Conclusions Deficits in recognition of specific facial emotions may reflect severity of psychiatric symptoms. They may be related to specific clusters of psychotic symptoms, which need to be confirmed in further studies.
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Differential serum acute-phase biomarker profile in schizophrenia and bipolar disorder

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There is a growing interest in inflammation and immune dysfunction in severe psychiatric disorders such as schizophrenia and bipolar disorder. This dysfunction seems to consist in abnormal blood levels of cytokines and acute-phase proteins, with increased levels of C-reactive protein (CRP), fibrinogen, homocysteine and erythrocyte sedimentation rate (ESR). Higher levels can be found in acute episodes and in patients with a higher cardiovascular risk. Acute-phase protein serum parameters were determined in a sample of 100 outpatients with schizophrenia ($n = 50$) or bipolar disorder ($n = 50$) so as to assess differences in pro-inflammatory state. Metabolic state was assessed through BMI, waist circumference, glucose, cholesterol and triglyceride levels.
The whole sample showed higher levels of fibrinogen (mean 4 ± 0.9 g/L), triglycerids (mean 2.9 ± 8.5 mmol/L), cholesterol-LDL (mean 3 ± 0.9 mmol/L), and homocysteine (mean 16.2 ± 7.3 umol/L) than our laboratory reference values from healthy individuals.
After correcting for gender and pharmacological treatment, patients with schizophrenia showed higher levels of ESR, fibrinogen, glucose and CRP, while homocysteine was not statistically different between patients with schizophrenia or bipolar disorder (see Table 1).
These results may suggest a different biomarker profile in bipolar and schizophrenic outpatients, with a more severe pro-inflammatory state in schizophrenia. Serum homocysteine levels could be a state marker in both disorders.

Table 1

	ESR (mm)	Fibrinogen (g/L)	Glucose (mmol/L)	CRP (mg/L)	Homocysteine (mmol/L)
Schizophrenia	6 ± 5.7	4.1 ± 0.85	5.7 ± 2.0	5.4 ± 4.2	17.1 ± 8.6
Bipolar disorder	$3.1 \pm 2.2^*$	$3.6 \pm 0.76^*$	$4.4 \pm 0.95^*$	$2.2 \pm 2.0^*$	15.9 ± 5.7 (NS)

NS: not significant. $^*P < 0.05$.

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Akathisia: Prevalence and risk factors in a community-dwelling sample of patients with schizophrenia. Results from the multi-center FACE-SZ Dataset

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The main objective of this study was to determine the prevalence of akathisia in a community-dwelling sample of patients with schizophrenia, and to determine the effects of treatments and the clinical variables associated with akathisia. Three hundred and seventy-two patients with schizophrenia or schizoaffective disorder were systematically included in the network of FondaMental Expert Center for Schizophrenia and assessed with validated scales. Akathisia was measured with the Barnes Akathisia Scale (BAS). Ongoing psychotropic treatment was recorded. The global prevalence of akathisia (as defined by a score of 2 or more on the global akathisia subscale of the BAS) in our sample was 18.5%. Patients who received antipsychotic polytherapy were at higher risk of akathisia and this result remained significant (adjusted odd ratio = 2.04, $P = .025$) after controlling the influence of age, gender, level of education, level of psychotic symptoms, substance use comorbidities, current administration of antidepressant, anticholinergic drugs, benzodiazepines, and daily-administered antipsychotic dose. Our results indicate that antipsychotic polytherapy should be at best avoided and suggest that monotherapy should be recommended in cases of akathisia. Long-term adminis-

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tration of benzodiazepines or anticholinergic drugs does not seem to be advisable in cases of akathisia, given the potential side effects of these medications.

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Antipsychotic-induced tardive dyskinesia: The role of glutamatergic system

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Tardive dyskinesia (TD) occurs in 20–25% of patients with long-term antipsychotic therapy. Abnormalities in glutamatergic transmission are considered one of the key components of the pathogenesis of drug-induced side effects. Glutamate acts as excitotoxin under certain conditions and in excessive concentrations.
Aim is to study the concentration of glutamate and analysis of single nucleotide polymorphisms (SNP) in genes coding the glutamate transporter and NMDA-receptors in schizophrenic patients with TD and without it.
The study group included 156 patients with schizophrenia receiving long-term antipsychotic treatment. Patients were divided into two groups: 63 patients with TD and 93 patients without it. Glutamate was determined in serum by spectrophotometric method. Determination of allelic variants of gene SLC1A2 (rs4354668) and GRIN2A (rs2650427, rs1969060) was performed by polymerase chain reaction in real-time.
We found a significant ($P < 0.05$) increase of the concentration of glutamate in patients with TD. Significant ($P < 0.05$) reduction in frequency of genotype GG of GRIN2A (rs1969060) and TT of SLC1A2 (rs4354668) were found in patients with TD in comparison to group without TD. In the study of glutamate concentration depending on the genotype GRIN2A (rs1969060) and genotype SLC1A2 (rs4354668) we observed a statistically significant change: elevated levels of glutamic acid identified with the heterozygous genotype in patients.
It is possible to suggest that reduction in frequency of these genotypes increases the risk of movement disorders due to the protective effect of these genotypes.

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Cognitive function in female patients with schizophrenia and metabolic syndrome

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Introduction The metabolic syndrome (MetS) and cognitive impairments, both related with poor outcomes in schizophrenia, are common in patients with this disorder. MetS has been associated with cognitive impairments in schizophrenia, but there is no general consensus regarding the description of various domains of neurocognition in patients with schizophrenia related to MetS.

Objectives The goal of this study was to assess cognitive functions in female patients with schizophrenia complicated by metabolic syndrome compared to those with schizophrenia without metabolic syndrome.

Methods Fifty-four female patients diagnosed with schizophrenia were divided into two groups: MetS group (MetS+) and non-MetS group (MetS−). Cognitive functioning were investigated using the Brief Assessment of Cognition in Schizophrenia (BACS).

Results Twenty-seven (52%) patients with schizophrenia met criteria for the MetS diagnosis. Mean age of patients was 40.80. Patients from MetS+ group performed significantly worse on verbal memory ($P = 0.005$), executive functions ($P = 0.028$) and motor speed ($P = 0.035$) as compared to MetS− group. Patients with schizophrenia who were hypertensive showed cognitive impairments in 2 domains of cognition: attention and speed of information processing ($P = 0.004$) and verbal fluency ($P = 0.001$). Patients with hypertriglyceridemia performed significantly worse on verbal memory ($P = 0.005$). Motor speed was associated with waist circumference ($P = 0.02$).

Conclusions At a mean age of 40 years old, female patients with schizophrenia and metabolic syndrome show difficulties in more domains of cognitive function compared to female patients with schizophrenia without metabolic syndrome. Our findings suggest a link between cognition and metabolic syndrome in female patients with schizophrenia.

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Comparing cognitive functions in medication adherent and non-adherent patients with schizophrenia

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Background Medication non-adherence presents a considerable problem in patients with schizophrenia. Cognitive and executive functions can affect adherence. The association between medication non-adherence and cognitive impairment in schizophrenia is under investigated with limited and conflicting research data.

Purpose of the study To prospectively assess the rate of drug adherence among a sample of patients with schizophrenia and to compare the cognitive and executive functions between adherent and non-adherent patients.

Subjects and methods One hundred and nine patients with schizophrenia diagnosed according to the DSM-IV classification were initially assessed by the Wechsler Adult Intelligence Scale (WAIS), Wechsler Memory Scale-Revised (WMS-R) and Wisconsin Card Sorting Test (WCST) and six months later by the Brief Adherence Rating Scale (BARS).

Results Among the patients, 68.8% were non-adherent to their antipsychotic medication. Adherent patients (31.2%) had significantly higher mean scores for the total, verbal and performance IQ. Moreover, they had significantly higher mean scores in most of WMS subtests (orientation, information, verbal paired association, digit span, visual memory span), and higher mean scores for; total correct, conceptual level response, percentage and categories completed on the WSCT subscales ($P < 0.0001$). Whereas the non-adherent group had higher mean scores in; trials administered, total errors, perseverative responses, and perseverative errors ($P < 0.0001$). In a step regression analysis, digit span, conceptualization, total and percentage of errors were putative predictors of non-adherence to antipsychotic medications.

Conclusion Cognitive deficits, especially verbal memory and executive functions were the strongest patients' related factors associated with non-adherence to medication. Psychiatrists should