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EDITORIAL

From generation of biomarkers to treatment and psychosocial aspects of psychosis

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Transcriptome and proteome analyses in psychiatric diseases have furthered the understanding of pathogenesis on a molecular level. However, most of the potential biomarker candidates have not been validated in peripheral fluids such as blood and cerebrospinal fluid (CSF). In schizophrenia, there is a need for biomarkers allowing early diagnosis and prediction of outcome as well as development of treatment options based on neurobiological processes. However, the management and safety of lumbar puncture in schizophrenia patients is under discussion. Kranaster et al. [1] report here for the first time an evaluation of clinical use and safety of CSF diagnosis in 155 patients with first-episode schizophrenia. This study may encourage future investigations of CSF biomarkers in the disease.

A further marker of disturbed brain development in schizophrenia is the gyrification index of the brain, which is determined during neurodevelopment and may be under genetic control. In a study in monozygotic and twins and unrelated siblings, Hasan et al. [2] found no effects of genetic background on the gyrification index in several brain regions, suggesting a stronger influence of environmental factors like intrauterine conditions and early postnatal development on this morphological feature.

Other structural abnormalities such as ventricular enlargements are among the most consistent findings in schizophrenia. In a combined structural MRI and DTI study, Horga et al. [3] report that ventricular enlargement is globally interrelated with gray matter volume deficits but not with volume loss in the immediately adjacent caudate, putamen, or internal capsule. Oligodendrocytes play a major role in nerve cell propagation and myelination of axons connecting brain regions. Effects of antipsychotic medication on oligodendrocyte degeneration have been investigated by Steiner et al. [4], who found cell protective effects of haloperidol and clozapine in a serum and glucose deprivation model, suggesting that previously reported decreases in oligodendrocyte numbers in schizophrenia are rather disease related than caused by antipsychotic medication.

Degner et al. [5] deal with another aspect of atypical antipsychotic treatment, namely EEG alterations in patients under olanzapine treatment, which have been commonly observed and found to be dependent on dosage. Pharmacological treatment in major psychoses should consider medical and psychopathological comorbidities. Altamura et al. [6] give an actual overview on this topic. An important treatment outcome in schizophrenia is the subjective quality of life and psychosocial functioning. They were measured by different rating scales and showed that greater symptom severity and worse insight were associated with worse functioning and stress further investigations on identifying treatment targets to improve social functioning in schizophrenia [7]. In a Brazilian catchment area, a psychosis continuum has been detected in a sample of 1,464 adults in order to identify psychotic symptoms [8]. Different risk factors have been identified influencing the manifestation of psychotic symptoms. Altogether, this issue of EAPCN gives a broad overview on neurobiological, treatment-related and psychosocial aspects of psychosis.

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References

1. Kranaster L, Koethe D, Hoyer C, Meyer-Lindenberg A, Leweke FM (2011) Cerebrospinal fluid diagnostics in first-episode schizophrenia. Eur Arch Psychiatry Clin Neurosci. doi:10.1007/s00406-011-0193-7
2. Hasan A, McIntosh AM, Droese UA, Schneider-Axmann T, Lawrie SM, Moorhead TW, Tepest R, Maier W, Falkai P, Wobrock T (2011) Prefrontal cortex gyrification index in twins: an MRI study. Eur Arch Psychiatry Clin Neurosci. doi:10.1007/s00406-011-0198-2
3. Horga G, Bernacer J, Dusi N, Entis J, Chu K, Hazlett EA, Mehmet Haznedar M, Kemether E, Byne W, Buchsbaum MS (2011) Correlations between ventricular enlargement and gray and white matter volumes of cortex, thalamus, striatum, and internal capsule in schizophrenia. Eur Arch Psychiatry Clin Neurosci. doi:10.1007/s00406-011-0202-x
4. Steiner J, Sarnyai Z, Westphal S, Gos T, Bernstein HG, Bogerts B, Keilhoff G (2011) Protective effects of haloperidol and clozapine on energy-deprived OLN-93 oligodendrocytes. Eur Arch Psychiatry Clin Neurosci. doi:10.1007/s00406-011-0197-3
5. Degner D, Nitsche MA, Bias F, Rüther E, Reulbach U (2011) EEG alterations during treatment with olanzapine. Eur Arch Psychiatry Clin Neurosci. doi:10.1007/s00406-011-0208-4
6. Altamura AC, Serati M, Albano A, Paoli RA, Glick ID, Dell'osso B (2011) An epidemiologic and clinical overview of medical and psychopathological comorbidities in major psychoses. Eur Arch Psychiatry Clin Neurosci. doi:10.1007/s00406-011-0196-4
7. Brissos S, Balanzá-Martinez V, Dias VV, Carita AI, Figueira ML (2011) Is personal and social functioning associated with subjective quality of life in schizophrenia patients living in the community? Eur Arch Psychiatry Clin Neurosci. doi:10.1007/s00406-011-0200-z
8. Loch AA, Wang YP, Rössler W, Tófoli LF, Silveira CM, Andrade LH (2011) The psychosis continuum in the general population: findings from the São Paulo Epidemiologic Catchment Area Study. Eur Arch Psychiatry Clin Neurosci. doi:10.1007/s00406-011-0204-8