Active Immune Processes Involved in the Pathogenesis of Functional Psychoses?

Summary / Zusammenfassung
Evidence from several recent studies has suggested that active immune processes may be involved in the pathogenesis of the functional psychoses “schizophrenia”, “schizoaffective disorder” and “bipolar illness”. Specifically, significant alterations of T-cell function, along with activation of the inflammatory response system, appear to be linked to treatment-resistant schizophrenia. Similar processes have also been observed with mood disorders in general. The abnormalities of CNS metabolism observed with functional psychoses, major depression, and other psychiatric disorders might, therefore, arise because genetically modulated inflammatory reactions damage the microvascular system of the brain, with the nature of the infectious agent being less important than the patients’ genetically influenced inflammatory response. Interestingly, several antidepressants and antipsychotics that have proven to be effective in the treatment of major depression and functional psychoses appear to also possess an anti-inflammatory effect.

IgM levels are in use as diagnostic markers for rheumatoid arthritis (RA), but possess a low specificity, as elevated IgM levels are observed with many other somatic conditions. To model activation of inflammatory response system in depression and schizophrenia through genotype-based classifiers, we have carried out a normative study based on a large sample ascertained through index cases with a somatic diagnosis of RA, simply because elevated IgM levels are observed with RA (1,868 genotyped subjects). Using a 3-stage Neural Network Analysis approach we found, under the constraint of reproducibility, a configuration of 16 genomic loci that enabled re-classification of subjects with respect to their IgM levels through genotype-based classifiers at a sensitivity and specificity of >90%. Have a molecular-genetic model that describes genetic predisposition to IgM levels and predicts these levels in the individual patient, we are currently applying this model to 1,003 patients suffering from major depression or functional psychoses in order to find out how much of the observed psychopathology variance can be explained through the molecular-genetic model.

Weitere Informationen unter http://www.ifrg.uzh.ch/eutwins.php

Publications / Publikationen

Stassen HH, Hoffmann K, Scharfetter C: The Difficulties of Reproducing Conventionally Derived Results through 500k-Chip Technology. BMC Genet Proc. 2009; 3 Suppl 7: S66


Keywords / Suchbegriffe
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Other Links to external Webpages / Andere Links zu externen Webseiten
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