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UPDATES IN CLINICAL MEDICINE

Update in Psychiatry

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Bipolar disorder (BP) or the maniac-depressive disorder is a major research topic in psychiatry due to its lifetime prevalence (1%-2% in any population), chronic course and recurrence risk in patient relatives. Moreover, the lifetime prevalence of bipolar spectrum disorders is about 7%. Thus, the bipolar disorders represent a huge burden on mental health policy all over the world.

Recently two high ranking journals, Molecular Psychiatry and American Journal of Human Genetics published two papers making important contributions to the genetics of this severe psychiatric condition.

Among the authors who contributed to the discoveries presented in the papers there is a Romanian researcher – dr. Maria Grigoroiu-Serbanescu from the Psychiatric Genetics Research Unit of Obregia Psychiatric Hospital of Bucharest (1,2).

The first discovery refers to two new susceptibility genes for BP: NCAN and MAD1L1. NCAN encodes neurocan, an extracellular matrix glycoprotein. The gene is highly expressed in the brain, and is thought to be involved in cell adhesion and migration. MAD1L1 (mitotic-arrest-deficient-like-1) is a component of the chromosome spindle-assembly checkpoint in mitosis and is expressed in hippocampus. Its neurobiological effect is not known yet. The international consortium that authored the discoveries involved seven European countries, USA and Australia.

The second discovery explains differences between early and late onset BP. Structural variants consisting of common copy number variations (CNV) (microduplications on chromosome 10q11 and 6q27) were significantly overrepresented in BP patients with age-of-onset <21years compared with controls. These CNVs were not present in BP patients with onset after age 21.

References

1. **Cichon S, Mühleisen TW, Grigoroiu-Serbanescu M, et al.** – Genome-wide association study identifies a novel susceptibility gene for bipolar disorder and schizophrenia: neurocan (NCAN). *Am J Hum Genet.* 2011; 88: 372-381
2. **Priebe L, Degenhardt F, Grigoroiu-Serbanescu M, et al.** – Genome-wide survey implicates the influence of copy number variants (CNVs) on the development of early-onset bipolar disorder. *Molecular Psychiatry,* 2011, in press.

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