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Poster presentation

Genetic investigation of dopamine and GABA in mood disorders

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Background

Serotonin and norepinephrine are the most extensively studied neurotransmitters in mood disorders. Other neurotransmitter systems are considered to be also involved and recent interest expands to include them in the research. Here we present the findings of genetic association studies regarding dopaminergic and GABAergic receptors in mood disorders.

Material and Methods

Fourty-eight patients with bipolar, 40 with unipolar mood disorder and 50 normal subjects were diagnosed after personal interview according DSM-IV criteria and were genotyped for the dopamine receptor D_2 and D_3 genes (DRD2 on chromosome 11q22-q23 and DRD3 on chromosome 3q13.3) and for the GABA receptor alpha5 and beta3 genes (GABRA5 and GABRB3, both in the region 15q11-q13).

Results

A genetic association was observed between the DRD3 gene and unipolar mood disorder and between the GABRA5 gene and bipolar mood disorder. For the DRD2 and GABRB3 genes, evidence for association with affective illness was not found.

Discussion

These results suggest that, in addition to other neurotransmitter systems and biological aberrations, dopaminergic and GABAergic influences may be implicated in the pathogenetic mechanisms of mood disorders.