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INDIVIDUALIZING CLOZAPINE AND RISPERIDONE TREATMENT FOR SCHIZOPHRENIA PATIENTS

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Schizophrenia is one of the most devastating mental and neuropsychiatric disorder that affects almost 1% of the population. It is usually diagnosed during adolescence and later on, symptoms like delusions, hallucinations, depression, etc, appear. Environmental and genetic factors play important role in the development of schizophrenia, but, causes leading to it are still unknown.

Clozapine is essentially the first drug that falls under the banner of the 'atypical' drugs and is effective both in positive as well as in negative symptoms and cognitive dissonance. Risperidone is another atypical antipsychotic which is effective against negative symptoms and seems to be the treatment of choice for newly diagnosed patients.

According to various studies, candidate gene variants are associated with clozapine's and risperidone's response; in particular, dopamine, serotonin glutamate receptor genes, hormone-related genes, neurotransmitter transporter genes and nucleotide binding protein genes.

Our aim was to put together current research concerning those two drugs. Moreover, our work allows the comparative study of polymorphisms in specific genes for two commonly used drugs for the individualization of treatment.

Pharmacogenetic studies of clozapine and risperidone in SZ have thus far provided incongruent findings. However, the recent significant improvements in pharmacogenomics approaches and available technologies may lead to the identification of clear-cut determinants which, if implemented in a framework of molecular and clinical information, would significantly contribute to the prediction of treatment response and prevention of Adverse Drug Reactions.

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