

Inflammation, depression and antidepressant response: Common mechanisms

May 29 2008

Major depressive disorder is a common and complex condition that impacts about 15% of the population of the United States, yet very little is known about the mechanisms behind the psychiatric disorder. What is known is that there are clinical parallels between depressive symptoms and the symptoms of certain inflammatory disorders.

In findings published electronically in *Molecular Psychiatry*, researchers from University of Miami found polymorphisms in inflammation-related genes that are associated with susceptibility to major depression and antidepressant response. Two genes critical for T-cell function in the immune system have been associated with susceptibility for major depressive disorder and antidepressant treatment response: PSMB4 (proteasome beta 4 subunit) and TBX21 (T-bet).

The study population was made up of 284 depressed Mexican-Americans from Los Angeles who were already enrolled in a pharmacogenetic study of antidepressant treatment response. The control group was made up of 331 individuals from the same community.

“Our findings suggest that a simple blood test to look for these genes could help us identify people who are at risk for depression,” said Ma-Li Wong, M.D., professor and vice chair for translational research in the Department of Psychiatry and Behavioral Sciences at the Miller School of Medicine and lead author of the study. “We would know to watch these people in stressful situations, such as a soldier in combat, and intervene earlier to get them the help they need.”

Interestingly, genetic variations in PSMB4 and TBX21 may also be relevant to two immune disorders, psoriasis and asthma. Both of these disorders are known to be co-morbid with major depressive disorder and are related to psychosocial stressors.

Source: Molecular Psychiatry

Citation: Inflammation, depression and antidepressant response: Common mechanisms (2008, May 29) retrieved 19 April 2024 from <https://medicalxpress.com/news/2008-05-inflammation-depression-antidepressant-response-common.html>

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