ACNP

American College of Neuropsychopharmacology

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RESEARCH FINDS LINK BETWEEN DEPRESSION AND HEART DISEASE

Findings suggest patterns of risk in co-occurring conditions

Boca Raton, FL, December 8, 2007 – Depression triples the risk of death following a heart attack, even when accounting for other heart attack risk factors, according to research presented today at the American College of Neuropsychopharmacology (ACNP) annual meeting, which showed that among 360 depressed, post myocardial infarction patients followed for more than six years, those who did not recover from their depression in the first six months were more than twice as likely to die.

This study was one of several presented at a panel which examined the links between depression and vascular disease. "There is an unequivocal link between depression and heart disease, but it is not clear what causes this link," said Alexander Glassman, M.D., Professor of Psychiatry at Columbia University, College of Physicians and Surgeons and ACNP member. "There is a whole series of factors that link depression and heart disease and we are just beginning to understand how antidepressants act in people who have these conditions together." Additional risk factors that tend to be major medical predictors of death from a heart attack include the severity of the heart attack and variability in various measures of heart function during recovery.

Depression has increasingly been recognized to increase the risk for cardiovascular disease. Possible reasons for this association include sticky platelets, a condition depressed patients are likely to have, or autonomic nervous activity, which increases heart irritability.

Ronald S. Duman, Ph.D., professor of psychiatry and pharmacology at Yale University School of Medicine and an ACNP member, also presented research on this topic. His work examined molecular mechanisms and the identity of the protein, vascular endothelial growth factor (VEGF). VEGF is a key growth factor in the formation of vascular cells and was originally identified and studied for its role in the formation of vascular tissues.

“We found that different classes of antidepressants increase the expression of VEGF in the hippocampus (the part of the brain which influences memory), which may partly explain how certain antidepressants are more effective than others,” said Duman. “Changes in brain levels of VEGF contribute importantly to the antidepressant response and that’s why studying VEGF function may be useful in developing medications that are more effective and rapid acting.”

The panel also included presentations from Kevin Tracey, M.D. and Gregory Miller, Ph.D., who presented evidence indicating the brain has significant control over the levels of inflammatory molecules called cytokines in other parts of the body, and that these levels are altered in depression and associated with an increased risk for heart disease. And Charles Nemeroff M.D., Ph.D., and professor and chair of the department of psychiatry at Emory University, presented data showing the impact of stressful events early in life on the response to stress later in life. These events precede either depression or heart disease and could potentially contribute to vulnerability for both conditions.

ACNP, founded in 1961, is a professional organization of more than 700 leading scientists, including four Nobel Laureates. The mission of ACNP is to further research and education in neuropsychopharmacology and related fields in the following ways: promoting the interaction of a broad range of scientific disciplines of brain and behavior in order to advance the understanding of prevention and treatment of disease of the nervous system including psychiatric, neurological, behavioral and addictive disorders; encouraging scientists to enter research careers in fields related to these disorders and their treatment; and ensuring the dissemination of relevant scientific advances.

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