



**INSTITUT DE
CARDIOLOGIE
DE MONTRÉAL**

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**PRESS RELEASE
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**A study led by the Montreal Heart Institute demonstrates that
elevated depression symptoms predict long-term cardiovascular mortality
in patients with atrial fibrillation and heart failure**

Montreal, July 6, 2009 – According to a study led by researchers at the Montreal Heart Institute and directed by Nancy Frasure-Smith, PhD, elevated depression symptoms significantly predict long-term cardiovascular mortality in patients with atrial fibrillation history and heart failure symptoms. The results reported in the *Journal of the American Heart Association, Circulation*, on June 29, 2009, demonstrate that unmarried patients were also at increased risk. Risks associated with depression and marital status were additive, with the highest risk in depressed patients who were unmarried.

This study on depression is a sub-study from the Atrial Fibrillation and Congestive Heart Failure Trial (AF-CHF) of rhythm versus rate control treatment strategies funded by the Canadian Institutes of Health Research and directed by Dr. Denis Roy, cardiologist at the Montreal Heart Institute (MHI) and Vice-Dean of the Université de Montréal's Faculty of Medicine.

Methodology and results

Between May 2001 and June 2005, researchers assessed the predictive importance of depression in 974 patients enrolled in the multinational randomized AF-CHF Trial. Prior to randomization, participants completed the Beck Depression Inventory-II (BDI-II), a well-validated measure of depression symptoms, with 32 % of patients showing elevated scores. Over an average follow-up of 39 months, there were 302 deaths, of which 246 were due to cardiovascular causes, including 111 deaths presumed to be related to heart beat irregularities.

After adjusting for other factors, including age, marital status, heart failure causes, left ventricular ejection fraction and previous atrial fibrillation hospitalization, researchers found elevated depression scores significantly predicted 57 % increased risk of cardiovascular death and 69 % increased risk of death from arrhythmias.

Although depressed patients were less likely to be married than the non-depressed, elevated depression symptoms and marital status both significantly predicted time to cardiovascular death.

“In the absence of clinical trials specifically addressing these psychosocial risks among congestive heart failure patients with atrial fibrillation, we believe that depression and not having a marital partner should be considered as risk markers identifying patients who may require additional treatment efforts to manage their cardiac conditions and modify other known risks,” said lead author Nancy Frasure-Smith. “Knowledge of depression and marital status add significantly to more established indicators’ ability to help identify patients at greater risk.”

About atrial fibrillation

Atrial fibrillation is a cardiac rhythm disorder in which the upper chamber of the heart (the atria) beats irregularly and very rapidly. Patients may experience this in the form of palpitations, shortness of breath or chest pain. This is the most common form of sustained arrhythmia. Contrary to ventricular fibrillation (originating in the ventricles or lower chamber of the heart), atrial fibrillation is rarely fatal but does require treatment as it can lead to severe discomfort, heart failure or stroke. Atrial fibrillation affects roughly 2.2 million Americans, predominantly the elderly.

About congestive heart failure

Congestive heart failure affects over 4 million Americans and the number of patients suffering from heart failure will continue to rise over the next few decades. Heart failure is a clinical syndrome where the heart is unable to pump enough blood to satisfy the organism's metabolic needs. In roughly two-thirds of cases, the dysfunction is caused by defective cardiac muscle contraction due to coronary disease and hypertension. Despite recent advances in our understanding of the physiopathology of heart failure and the development of new drugs, the prognosis remains serious. The five-year mortality rate is 50%, and heart failure is the main cause of cardiovascular hospitalizations.

About the Montreal Heart Institute: www.icm-mhi.org

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