

# Cardiovascular Disorders and Depression

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Cardiovascular disorders and major depressive disorder (MDD) are among the top ten contributors to the global burden of disease. It has been estimated that by the year 2030, MDD will replace cardiovascular disorders as the biggest contributor to Disability-Adjusted Life Years (DALYs) [1]. Prevalence of MDD has been found to be high in various physical illnesses [2]. Similarly, rate of physical illness including cardiovascular disease, stroke, dementia, osteoporosis, diabetes, and the metabolic syndrome have been found to be higher among those suffering from depression [3]. While the bidirectional association between MDD and physical illnesses has been well established, the causal pathways are still being debated.

Depression has been established as an independent risk factor for cardiovascular disorders [4]. However, MDD remains underdiagnosed among those suffering from cardiovascular disorders [5]. Depression has been postulated as a potential contributor to cardiovascular morbidity and mortality. Antidepressant cardiotoxicity, association of depression with cardiac risk factors, association of depression with greater coronary disease severity, non-adherence to cardiac prevention and treatment regimens, lower heart rate variability (HRV) reflecting altered cardiac autonomic tone, increased platelet aggregation and inflammatory processes have been cited some of the mediators of this causal association [6]. Both somatic and affective symptoms of depression have been found to be predictors of all cause mortality among patients with congestive heart failure (CHF) [7].

Co-occurrence of depression and cardiovascular disorders poses management challenges for both these conditions. Depression has been identified as treatment target for patients with CHF as it has been associated with poor post-in patient care functionality among these individuals [9]. However, impact of depression treatment on cardiovascular morbidity and mortality remains debatable [8]. In the current issue of this journal, Hussain et al [12] report findings of a study exploring prevalence of depression among patients with CHF in a Chinese in-patient

hospital setting. Additionally, they have explored correlation of depression with various clinical parameters in the study participants. Findings of this study highlight the importance of screening in-patients with CHF for depression. A high rate of depression, as assessed by Beck Depression Inventory (BDI), was found among both male and female patients. The high rate of depression found in the current study is in keeping with the findings from studies conducted in the western populations [10, 11] Severity of depression was found to vary with the severity of CHF with those having class III and IV CHF on NYHA Functional Classification for heart failure having more severe depression. Additionally, depression was found to be a predictor of worse blood sugar, mean blood pressure and left ventricular ejection fraction (LVEF) among these patients. Previous history of smoking, alcoholism and hypertension was associated with a higher frequency of depression in this study.

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