

Prevalence and Risk Factors of Post-Myocardial Infarction Major Depressive Disorder

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Abstract:

Objective: Post-myocardial infarction depression is a common disorder that has serious implication on post-myocardial patients. However, little is known about possible factors responsible for increased risk of depression in those patients. The primary objective of this study was to evaluate possible association between risk factors of myocardial infarction and development of major depression in those patients. **Subjects and Method:** Seven hundreds of Patients who developed acute myocardial infarction were screened for the presence of depressive symptoms using Hamilton depression scale. Patients who had a score of 10 on Hamilton depression scale were interviewed to detect cases of major depression, who are compared with a similar number of patients who did not develop depression regarding possible association between risk factors of myocardial infarction and development of major depression. **Results:** Following acute myocardial infarction, 16.26 % of patients developed major depressive disorder. No gender difference was detected between patients who had or had not developed depression. Family and past history of depression were significantly higher in patients who developed post-myocardial major depression. High serum cholesterol level, low level of high density lipoprotein, obesity, and high level of perceived stress were more in patients who developed major depression. No significant difference was detected between depressed and non-depressed patients regarding blood pressure and smoking. **Conclusion:** Some of the risk factors of myocardial infarction may play a significant role in the etiopathogenesis of post-myocardial major depression, however familial and genetic factors contribute also significantly of post myocardial infarction depression.

Introduction:

Major depression is common in individuals with coronary artery disease; a 1-year incidence of 31% of major and minor depression was found in first- post-myocardial infarction patients, (Strik, 2004). During the first 18 months following MI major depression was found to occur in 15-30% of patients, (Strik et. al., 2001). Several studies have associated depressive symptoms with increased risk of coronary artery disease, (Lett et. Al., 2004), greater impairment in activities of daily living, (Travella et. Al., 1994), an increased risk for cardiac complications after the onset of acute myocardial infarction (AMI), (Shiotani et. al., 2002), and increased mortality after 12 months of the acute myocardial infarction, (Carney 2003). In addition to the survival risks associated with post-myocardial infarction depression, there are increased health care costs linked to both readmissions and out-patient contacts among depressed patients who survive the first post-MI year, (Frasure-Smith, 2000). A number of biobehavioral mechanisms have been proposed as linking depression and

coronary artery disease, including treatment adherence, lifestyle factors, alterations in autonomic nervous system, (as reflected by decreased heart rate variability), alteration of hypothalamic pituitary adrenal (HPA) axis functioning, altered blood platelet function, and immune function alteration, (Carney 2001, Grippo and Johnson, 2002, Lett, 2004).

These mechanisms appear to explain mainly the effects of depression on the cardiac condition; however, risk factors of development of post-myocardial infarction depression are little studied. The aim of this study was to determine how frequently major depressive disorder occur after myocardial infarction, and to investigate some of the known risk factors of acute myocardial infarction as a potential risk factors of developing post-myocardial infarction depression. These include primarily studying association of stress, obesity, hypertension, total serum cholesterol, high density lipoproteins, and smoking with the development of depression.