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The Link Between Chronic Coronary Heart Disease and Psycho-Emotional Disorders

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Abstract: Coronary heart disease (CHD) is one of the severe illnesses that can cause significant moral and economic damage to society today. There are many studies in the literature on whether psychiatric disorders can cause (CHD)or increase the prevalence after (CHD). Although many studies emphasize the importance of early diagnosis and treatment of depression in patients with IBS, clinicians do not pay much attention to depression in everyday practice. Several scales have been developed that are conveniently used to describe anxiety and depression in patients with IBS. The high rates of depression and anxiety predicted by the psychological symptom scales after HPA treatment are strongly associated with treatment success and prognosis of (CHD) We believe that patients with (CHD) should be closely monitored for depression and anxiety disorders because their treatment may improve the prognosis of (CHD).

Keywords: Coronary heart disease, depression and anxiety scores, psycho-emotional disorder.

Introduction. Coronary heart disease (CHD) remains an important cause of morbidity and mortality despite advanced medical and interventional treatments. Depression and anxiety disorders are often associated with CHD and adverse events in these patients [1,2]. Major depressive illness has been shown to increase the risk of both cardiovascular disease and cardiac death [4,6,8]. The prevalence of major depressive disorder in patients with CHD is too frequent to underestimate. Studies have reported a 20-30% prevalence of major depressive illness in individuals with CHD [5,7]. The effects of long-term cardiovascular exposure to endocrine and autonomic dysregulation are possible underlying mechanisms that may explain the relationship between major depressive illness and CHD [9]. In addition, chronic inflammation is thought to influence the etiopathogenetic process of depression and atherosclerosis [10,14,16]. The main aim of the study is to highlight the importance of diagnosis and treatment of mental disorders in patients with HPA and to inform the practical use of measures of depression and anxiety in patients with HPA.

Prevalence of depression in CHD

Previous studies have reported that the prevalence of depression is twice as high in [11]. A Chinese meta-analysis showed that the prevalence of depression in hospitalised patients with *CHD* was 51% and was higher than that in patients with CHD in the community (34.6% to 45%) [13]. Another study conducted in Australia found that anxiety symptoms became more prevalent in HBS [9]. In a study by Lu et al. [18,21,23], 40.82% of depressed patients and 25.12% of anxious patients were identified during hospital admission. In general, levels of depression were higher than anxiety, and our results were similar to previous studies. In light of these results, we can conclude that the Chinese version of the Zung Depression Self-Assessment Scale and the Zung Anxiety Self-Assessment Scale may well describe depression and anxiety.

Relationship of depression and outcome in CHD

Previous studies have shown that psychological stress leads to increased atherosclerosis and cardiovascular mortality [15,16,17]. Several mechanisms have been proposed to explain the causal relationship between depressive illness and cardiovascular disease. Sympathetic nervous system activation during periods of depression and anxiety plays an important role in autonomic regulation of the cardiovascular system. Fluctuations in vagus nerve tone can lead to disturbances in heart rate variability and blood pressure balance, as well as a loss of baroreceptor reflex function [20,22,25].

Psychological disorders, such as depression and anxiety, are underestimated because of the focus on coronary events in patients with CPS and are not well known [24]. In addition, psychological disorders predispose to cardiovascular disease in healthy individuals and determine prognosis in patients with existing cardiovascular disease [13,14,16]. A previous report-based cohort study has shown that depression predicts a significant increase in myocardial infarction and all-cause mortality]. Depression is also known to predict survival after myocardial infarction [24,25] and in patients with chronic heart failure [14,17]. Anxiety, which has similar pathophysiological characteristics to depression, is independently associated with increased mortality in patients with *CHD*, and its coexistence with depression worsens prognosis [18].

There is increasing evidence that psychological factors may adversely affect the outcome of *CHD*. The diagnosis and management of some co-morbid psychiatric disorders during the treatment of ACS is also important [19,20]. In a previous study, during a follow-up period of eight to 13 months after revascularisation for ACS, 90.6% of patients had signs of depression, of which 35.8% had major depression.

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The use of antidepressant therapy and psychological support in addition to coronary intervention in depressed patients with acute MI has been shown to reduce subsequent cardiovascular morbidity and mortality [22].

Depression assessment and scores for patients with CHD

Although many studies emphasise the importance of early diagnosis and treatment of depression in patients with ASD, clinicians do not pay much attention to depression in everyday practice. Several scales have been developed that can be used to describe anxiety and depression. The Hospital Anxiety and Depression Scale (HADS) has been shown to be useful as a first-step screening scale to determine the level of psychological problems in patients with IBS.

Tesio et al. (21) showed that a threshold score of 14 on the HADS scale can be a useful first-step screening tool for depression in patients with IBS. Aydemir et al. [24] proved the validity and reliability of this scale using the Turkish version of the HADS scale. Ekici et al. [25] showed a positive correlation between the Gencini score and the HADS score in patients with HBS. Durmaz et al. [26] demonstrated that depression and anxiety scores were higher in patients with delayed coronary blood flow than in patients with normal coronary arteries. Yalvak et al. [27] found that patients with delayed coronary blood flow were prone to depression and anxiety in a population of 450 patients.

Moryś и др. указали, что шкала HADS может недооценивать симптомы депрессии у пациентов с КБС; Однако они пришли к выводу, что результаты шкал HADS были аналогичны результатам, полученным с помощью других шкал. Показатели депрессии можно повысить, используя другую шкалу, и результаты могут отличаться [28].

Tamam et al. (30) hypothesised that people with suspected HCC and who have undergone myocardial perfusion scintigraphy may experience significant distress because they are concerned that they may have a life-threatening event and are anxious about the procedure while waiting. They used the HADS and STAI assessments to evaluate some of the psychological characteristics of patients at risk for heart disease before myocardial perfusion scintigraphy [30]. looked for associations between coronary artery disease and symptoms of depression and anxiety using the Beck Depression and Anxiety Inventory. After accounting for gender and mixed variables, depression scores were significantly associated with coronary artery disease, whereas no association was found for anxiety scores. Chest pain was the main symptom considered in the decision to undergo coronary angiography in the study. However, chest pain can also be a symptom of several psychiatric disorders, such as panic disorder, depression, hypochondria, somatization disorder and generalised anxiety disorder. Vural et al have pointed out the importance of diagnosis, treatment and follow-up of depression and anxiety disorder to prevent unnecessary diagnostic cardiac catheterisation long before these conditions lead to CPS.

The main mechanisms of depression affecting the cardiovascular system

Functional changes in the hypothalamic-pituitary-adrenal-cortical axis and activation of the renin-angiotensin-aldosterone system can cause endothelial dysfunction and cardiac arrhythmias through increased secretion of proinflammatory mediators, catecholamines and steroid hormones [30]. In addition, depressive disorders can cause platelet activation by releasing chemokines such as platelet factor 4 and b-thrombomodulin, leading to coronary artery thrombosis (30). Several large-scale studies have demonstrated a strong association between anxiety and cardiovascular mortality. We believe that it would be a rational approach on the part of clinicians to disregard the presence of depression and anxiety in people with CABG.

Conclusions: Thus, the high rates of depression and anxiety predicted by the psychological symptom scales after CPS treatment are strongly associated with treatment success and prognosis. Depression and anxiety disorders are common in patients with IBS, and this causal relationship between psychological and physiological factors is questioned. We believe that patients with CBS should be closely monitored for the diagnosis of depression and anxiety disorder; as psychiatric treatment may improve the prognosis of CBS.

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