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Examining the pitfalls and challenges of standard cognitive behavioral therapy for panic disorder in cardiovascular patient population: A narrative review

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Abstract

Introduction: Panic Disorder (PD) is a common mental health condition that frequently occurs alongside cardiovascular disease (CVD), posing challenges for treatment. Cognitive Behavioral Therapy (CBT) is an established intervention for panic disorder; however, its use in patients with CVD poses challenges based on physiological risks and symptom overlap.

Materials and Methods: This narrative review summarizes the current literature regarding panic disorder in cardiovascular patients, with attention to the inadequacies of standard CBT and potential adaptations.

Results: Challenges in using CBT to treat panic disorder in patients with cardiovascular disease include difficulty differentiating panic and cardiac symptoms and precautions for exposure therapy due to physiological risks. Challenges in using CBT to treat panic disorder in patients with cardiovascular disease include the difficulty in distinguishing between panic and cardiac symptoms, as well as the need for caution during exposure therapy because of potential physiological risks. A new cognitive behavioral therapy-based protocol, known as Panic Attack Treatment in Comorbid Heart Diseases (PATCHD), has been proposed to address these challenges through modified exposure techniques, supervised exercise, and coping skills training.

Conclusion: Anxiety disorders are common among patients with cardiovascular disease, with adverse effects on disease prognosis. This population requires careful modification of the standard CBT approach in order for it to be both safe and effective. Future studies should evaluate the efficacy of modified interventions like PATCHD to enhance psychological and CVD outcomes.

Keywords: Cardiovascular disease, Cognitive behavioral therapy, Panic disorder

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Introduction

Physical illnesses and mental health disorders frequently co-occur and can, therefore, impact the effectiveness of treatment (1). Panic Disorder (PD) and CardioVascular Disease (CVD) are two health conditions that can significantly affect an individual's well-being. Anxiety disorders can result in poorer perceived mental health and greater use of healthcare services post-CVD (2). Panic disorder is characterized by unanticipated panic attacks that are present frequently and unpredicted. A panic attack is a sudden outburst of intense fear or distress that reaches its peak within a few minutes (3). CVDs continue globally as the leading causes of death overall, causing significant loss of health and increasing costs to health systems (4-5).

Anxiety disorders in cardiovascular patients

Anxiety disorder increases the risk of CVD (6). Data collected since the beginning of the 21st century consistently demonstrates a high prevalence of anxiety among patients with cardiovascular disease (7). Anxiety is an emotion that is characterized by tension, worry, and physical changes such as increased blood pressure, heart palpitations, and impaired muscle strength. When an individual's anxiety recurs or continues, it means that he/she has developed one of the anxiety disorders. Individuals with these disorders usually have frequent intrusive thoughts or worries (8). The association of anxiety disorders and CVDs has been studied in several epidemiological studies. In patients with a diagnosis of coronary artery disease, the prevalence of anxiety was found to be 27.4% in a study conducted in Nepal (9). Research done in Ethiopia found that 32.7 % of patients with hypertension showed symptoms of anxiety (10). According to research by Sisay et al. in patients with cardiovascular disease, anxiety symptoms were reported at a prevalence of 53.9% (11). The research indicates that anxiety is associated with a higher risk of heart problems and related death. A study by Todaro et al. found that 36% of participants with heart disease had a current anxiety disorder, and 45% had a lifetime diagnosis of an anxiety disorder (12). Anxiety disorders are present in approximately 10-23% of individuals with Coronary Heart Disease (CHD); however, among those with a prior cardiac event, prevalence rates may exceed 70% (13,14). Goodwin, Davidson, and Keyes conducted a study in which 43,093 US adults over 18 completed diagnostic interviews. Their findings indicated that Generalized Anxiety Disorder (GAD), PD, and specific phobia were each significantly associated with CVD. The odds ratios were 1.48, 1.46 and 1.29, respectively. Adjustment disorder with anxiety (with or without depression) is also a common anxiety disorder in CVD (15).

The effect of anxiety on CVDs

Although anxiety during a cardiac event and in the days following the event is, to some extent, normal, it can hinder the patient's adaptation and physical recovery during the recovery process. An individual with anxiety for an extended period is linked to a high risk of myocardial infarction. Anxiety can impact a patient's adherence to medication for CVD patients, reducing the available treatment options, worsening the prognosis, and increasing mortality rates (16). Patients who experience consistent anxiety following a cardiac event often exhibit delayed return to work and encounter increased difficulties in resuming sexual activity (17).

Fear of recurrence in CVDs

Even though great attempts have been made to enhance patient care and reduce an individual's risk, recurrent cardiovascular events remain a major issue in patients with CHD, especially considering that older patients presented with more complicated clinical evidence and more severe ischemic heart disease symptoms compared to younger patients (18). The research of Zhen et al. showed that elderly patients with CHD had a significantly higher fear of their disease recurrence, which was correlated with the disease development, recurrence history, coping style, and social support level. Medical staff should give psychological guidance to patients based on people's characteristics and health education to help patients have a correct understanding. The patient's social support should also be cleared to reduce the fear of recurrence, and the family should be required to supply the patient with extra care (19).

Anxiety disorders as a contributing risk factor in the onset of CVDs

There is a significant association between anxiety disorders and cardiovascular disease (20). Anxiety disorders were identified as a causal factor for elevated odds of CHD, myocardial infarction, and heart failure. However, no significant association was found with atrial fibrillation in individuals of European descent (21). The interaction of the two events

can worsen the patient's overall health (22-24). Studies have shown that despite controlling for standard risk factors, chronic anxiety heightens the risk of CHD in healthy individuals. Acute anxiety symptoms significantly raised the risk of CHD in a prospective study on healthy individuals (25). Emdin et al. reported that anxiety was associated with a 41% increased risk of cardiovascular-related mortality, a 41% greater risk of coronary heart disease, a 71% elevated risk of stroke, and a 35% higher likelihood of heart failure (26).

Panic and CVDs

Higher levels of anxiety symptoms, especially panic disorder, have been independently and significantly associated with increased overall risk for CAD over 10 years (27). Patients with panic disorder have higher resting heart rates and experience episodes of tachycardia during panic attacks (28). A study by Kotianova et al. found that panic disorder patients exhibit relative (reactive) sympathetic dominance compared to healthy individuals as assessed via an analysis of heart rate variability following a psychological stressor. This is related to the increased risk of cardiovascular complications in panic disorder (29). The epidemiological data also indicate a high rate of panic disorder in cardiac patients (30). However, studies have a certain degree of heterogeneity and methodological limitations, such as small sample sizes and the absence of sensitive scales to evaluate CVD and panic disorder (31). One recently published large-scale population study evaluated the incidence of CVD in patients with panic disorder over an approximate 10-year follow-up. The current study found a much higher relative risk for ischemic heart disease among those with panic disorder but no significant relationship between panic disorder and major coronary events (MCE). Compared to myocardial infarction, studies focused on panic disorder concerning stroke and death are limited (32).

Um et al. showed that panic disorder is not a risk factor for stroke later in life (33). At the same time, the study by Wu et al., a recent meta-analysis, found that individuals who have had a panic attack in the past 12 months have a 1.20-fold greater risk of stroke than those who have never had such an experience (32). Based on research conducted by Chang et al., the risk of death for people with panic disorder is 1.14 times higher than for the general population (34).

Treatment of anxiety disorders in cardiovascular patients

Primary interventions for managing anxiety disorders in cardiovascular patients include controlling CVD risk factors (35), exercise (36), cognitive behavioral therapy (37), serotonin reuptake inhibitors such as S-citalopram (36), and benzodiazepines (38).

Challenges of treating anxiety disorders in cardiovascular patients

The comorbidity of CVDs and anxiety disorders is a therapeutic challenge for cardiologists and psychiatrists (39). Often, anxiety symptoms can mimic cardiac symptoms, such as palpitations, tachycardia, and chest discomfort. This is especially true of panic disorder since patients often confuse its symptoms with those of a heart attack (14). Of all the anxiety disorders that may co-occur with heart disease, panic disorder, and panic attacks, the assessment, conceptualization, and treatment of cognitive behavioral therapists are particularly problematic. For example, chest pain and shortness of breath are pseudo-panic symptoms, but at the same time, they overlap with numerous symptoms of heart disease (40).

In summary, treating anxiety that is comorbid to heart disease poses a particular challenge for several reasons: (1) diagnostic overlapping between anxiety and heart disease, (2) high risk of ignoring symptoms of chest pain and, as a result, delay in seeking medical attention, (3) the need to adapt CBT based on catastrophic misinterpretation of physical symptoms to include risk element, (4) the possible harm of experiments to induce interoceptive symptoms with the burden of responsibility falling on therapists (40).

Challenges of standard CBT for cardiovascular patient population

Regrettably, there is very little empirical evidence to support the claim that routine cognitive behavioral therapy for anxiety disorders is safe for the cardiovascular patient population (41). Behavioral experiments performed in CBT create psychological stress, and they physiologically challenge the cardiorespiratory system. The potential risks of CBT for cardiovascular patients include increased rates of stroke, cardiac ischemia, cardiac shock, arrhythmogenesis, and syncope. Consequently, standard CBT needs to be adapted to incorporate this risk element. Also, some experiments inducing visceral symptoms may exacerbate arrhythmias or myocardial ischemia and are thus not advisable (40).

A new CBT model called "Panic Attack Treatment in Comorbid Heart Diseases (PATCHD)."

To overcome some of the clinical dilemmas mentioned earlier and respond to the absence of experimental treatments, Tully, Sardinha, and Nardi recently formulated a protocol for Panic Attack Treatment in Comorbid Heart Diseases (PATCHD). The protocol targets enhanced coping skills, safe visceral exposure, supervised exercise, and reduction in avoidance behaviors to reduce the occurrence of panic attacks. The results of 18 patients collected before and after the patients underwent PATCHD protocol demonstrated a significant decrease in both cardiac hospitalization and the length of stay in cardiac hospitals, and, respectively, decreases in panic attack frequency, general anxiety severity, and depressive symptoms (40).

Conclusion

Anxiety is a common psychological condition among individuals with cardiovascular disease; however, its significance and clinical management have only recently begun to receive adequate attention. There are challenges in the treatment of anxiety disorders in cardiovascular patients.

An intervention based on cognitive behavioral therapy, called Panic Attack Treatment in Comorbid Heart Diseases (PATCHD), has been designed to overcome the existing challenges. In the future, more studies should be conducted to examine its effectiveness so that, if proven effective, cardiovascular patients can benefit from cognitive behavioral therapy in a way that would not be risky for them.

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