

# Anxiety among Cardiac Patients with Acute Coronary Syndrome

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**Received:** 📅 February 25, 2023; **Accepted:** 📅 March 02, 2023; **Published:** 📅 March 12, 2023

## Abstract

Acute coronary syndromes (ACS) are a common ischemic heart disease (IHD) with high morbidity and mortality. Anxiety is common among cardiac patients, has potentially serious consequences if untreated, and is infrequently assessed or managed appropriately. The co-occurrence of anxiety symptoms and ACS is responsible for decreasing the quality of life (QoL) of patients with ACS. Anxiety is a common emotional response among acute coronary syndrome (ACS) patients. Anxiety is frequently encountered in ACS. It is believed that the prevalence of anxiety among cardiac patients is between 15 and 50%. Patients with ACS often experience anxiety due to the sudden onset of symptoms, the potential severity of their condition, and the uncertainty of their prognosis. Anxiety can also be a risk factor for adverse cardiac events and may interfere with treatment adherence and rehabilitation efforts. Therefore, it is important for healthcare providers to recognize and address anxiety in patients with ACS. This can involve a combination of pharmacological interventions, such as benzodiazepines or selective serotonin reuptake inhibitors (SSRIs), and non-pharmacological interventions, such as cognitive behavioural therapy, relaxation techniques, and stress management strategies. Additionally, healthcare providers can provide education and support to help patients better understand their condition and manage their symptoms. The importance of increased awareness and treatment of anxiety among patients with cardiac disease is stressed.

**Keywords:** *Cardiac Patients; Anxiety; Acute Coronary Syndrome*

## Introduction

Cardiovascular disease, especially ischemic heart disease (IHD), is the leading cause of death and disability globally. Acute coronary syndromes (ACS) are a common IHD with high morbidity and mortality. Although reperfusion interventions have improved mortality associated with ACS, acute ACS is a life-threatening disease worldwide. Many factors affect the outcomes of ACS, such as age, sex, prior ACS, hypertension, smoking, dyslipidemia, diabetes, and prior stroke. In recent years, numerous studies have shown that emotional distress, especially depression and anxiety, play an adverse role in the prognosis of ACS [1].

Acute coronary syndromes (ACS) are one of the life-threatening cardiovascular diseases. The incidence of ACS is increasing throughout the world. In the year 2020, the incidence rate is expected to increase by 120% for women and 137% for men in developing countries compared with 30-60% in developed countries (World Health Organization [WHO]). ACS, popularly called heart attack, is the necrosis of heart muscle resulting from ischemia [2]. Anxiety can significantly impact the quality of life of patients with ACS. An acute coronary syndrome is a serious medical condition that can cause fear and uncertainty about the future, and anxiety can exacerbate these feelings. Anxiety can lead to physical symptoms such as chest pain, palpitations, and shortness of breath, further increasing anxiety and decreasing quality of

life. Patients with ACS who experience anxiety may also be more likely to avoid activities that they perceive as stressful or risky, which can limit their ability to participate in activities they enjoy and have a negative impact on their overall quality of life [3].

Less research has focused on the role of anxiety. A recent meta-analysis showed that anxiety symptoms were associated with a 26% increased risk of incident coronary heart disease. Anxiety disorders have been associated with the development of coronary heart disease in younger men and with all-cause mortality in an older male population. The results for generalized anxiety disorder are inconsistent. Generalized anxiety disorder has been shown to be related to all-cause mortality in the veteran population. However, in a community sample of older persons, generalized anxiety disorder did not increase the risk of death [4].

It is a known fact that somatic disorders, in a certain percentage, are associated with a mental health problem, whether in the form of two co-existent diseases or whether psychological problems are only associated with symptoms and/or responses to somatic disease. Several studies have demonstrated an increased risk of sudden cardiac death in patients with phobic, generalized anxiety, and panic disorders. Anxiety increases the mortality rate in patients with heart diseases by increasing the risk of ventricular arrhythmias and sudden cardiac death. The continuation of exhibiting a high level

of anxiety after the diagnosis of coronary artery disease is a significant risk factor for developing myocardial infarction or death in these individuals [5]. Studies have shown that anxiety and depressive symptoms after ACS are associated with poorer outcomes in terms of cardiac mortality as well as all-cause mortality. Patients with depression have also been reported to have a higher rate of coronary interventions. Interestingly report that symptoms of depression and anxiety predicted neither cardiac nor all-cause mortality. Depression in patients with ACS also leads to poor medication adherence and may indirectly alter outcomes [6].

## Anxiety Phenomenon

Anxiety is a negative emotion that occurs in response to perceived threats that can come from internal or external sources and can be real or imagined. Anxiety is characterized by a perceived inability to predict, control, or gain the preferred results when confronted with a threat. Anxiety, like all emotions, has cognitive, neurobiological, and behavioral components. Although anxiety often is comorbid with depression, it is a distinct emotion. Usually characterized as a detrimental emotion, anxiety can be protective when it triggers coping responses that protect an individual from threats. In this way, anxiety may be adaptive, but it becomes maladaptive when it increases or persists to such a degree that the individual can no longer function effectively in everyday life. At this stage, anxiety can have negative consequences for the individual [7].

Anxiety exists from normal to pathological, and several anxiety disorders exist (panic disorder, phobic anxiety, generalized anxiety, anxiety reactions, and chronic anxiety). Despite the variety of manifestations of anxiety, evidence indicates that anxiety reactions at all stages along the continuum have similar cognitive, neurobiological, and behavioral components, and clinically diagnosed anxiety and subclinical anxiety are not fundamentally different phenomena. Thus, the potential link between anxiety and risk for cardiovascular disease events has implications for persons who have signs or symptoms of anxiety, and not just patients in whom a clinical anxiety disorder has been diagnosed [8].

## Acute Coronary Syndromes and Anxiety

Anxiety is common, even more so than depression, among persons with chronic cardiovascular disease and among those coping with recovery from acute cardiac events or interventions. The prevalence of anxiety is high; research findings consistently have indicated that between 18.5% and 31% of patients report anxiety shortly after the ACS, with a high incidence rate at approximately 70%-80% among patients with previous experience of an acute cardiac event; anxiety persists over the long term in about 20% to 25% of patients with cardiovascular disease. Even among patients with diagnosed cardiovascular disease who have not experienced an acute event or required intervention, the prevalence of anxiety is about 20% to 25%. Anxiety can hinder psychosocial adjustment to the chronicity of the cardiovascular disease and physical recovery after an acute event. Higher anxiety predicts a worse quality of life among pa-

tients with cardiovascular disease. Anxiety hinders patients' self-care abilities; overly anxious patients often cannot learn or act on information about lifestyle changes and have difficulties adhering to prescriptions for medication, activity, and diet [8].

Anxious patients experience problems coping with challenges; they perceive challenges as insurmountable barriers. Persistent anxiety predicts disability, increased physical signs and symptoms, and worse functional status. Anxious patients with cardiovascular disease return to work at a slower rate or not at all compared with non-anxious patients. Anxiety also interferes with patients' return to sexual activity after an acute cardiovascular event. Patients with sustained anxiety may experience "cardiac invalidism," a term that has fallen out of common use but that effectively describes a subset of patients with a cardiovascular disease whose level of debilitation or disability after a diagnosis of cardiovascular disease or an acute event is unexplained by the severity of their physical condition.

Research has shown that addressing anxiety in patients with ACS can improve their quality of life. Cognitive-behavioral therapy, relaxation techniques, and stress management strategies can help patients manage anxiety and cope with their condition. Additionally, improving communication between healthcare providers and patients, providing education about the condition and treatment options, and addressing any concerns or misconceptions can also help to reduce anxiety and improve quality of life (QoL). Anxiety affects adherence to lifestyle modifications such as dietary behavior changes, physical exercises, regular follow-up, proper medication as recommended by the physician, and timely return to work. Consequently, persistent anxiety after ACS has a negative effect on the prognosis of the disease and overall quality of life. Therefore, psychological responses to an ACS, such as anxiety, warrant attention. On the other hand, patients with ACS themselves have to regulate their lifestyle modification. The overall management goal is to prevent acute and chronic complications while preserving a good quality of life. The co-occurrence of anxiety symptoms and ACS are responsible for decreasing the QoL of patients with ACS. When this is indeed the case, the importance of increased awareness and treatment of anxiety symptoms among patients with ACS is stressed. Anxiety may thus be an important determinant of the QoL of patients with ACS. Therefore, a study on the impact of anxiety on QoL in patients with ACS is warranted [2].

## Impact of Anxiety on Cardiac Patients

Anxiety has both functionally appropriate and inappropriate consequences. Anxiety can be functionally appropriate among patients with the cardiac disease when it prompts an individual to quickly seek treatment for acute cardiac signs and symptoms. But anxiety may have medical or psychological consequences when it is persistent or severe, including difficulty adhering to prescribed treatments and making recommended lifestyle changes, adoption of or failure to change risky behaviours, increased risk for acute cardiac events, and increased risk for in-hospital complications af-

ter admission for the acute coronary syndrome. Yet, because anxiety is a universal emotion that is managed without consequence by many people, its importance is often ignored by healthcare providers. The impact of psychosocial (with a major emphasis on anxiety) and behavioral variables on biological outcomes was examined systematically [8].

## Conclusion

Anxiety is common among cardiac patients, has potentially serious consequences if untreated, and is infrequently assessed or managed appropriately. Overall, addressing anxiety is an important component of managing ACS and can positively impact the patient's quality of life.

## Recommendations

Anxiety assessment and treatment should be a part of the care of every cardiac patient in order to enhance recovery and decrease patients' risk of recurrent cardiac events. Further research in this area should be focused on delineating the mechanisms whereby anxiety causes poorer outcomes. Hypothesize that both physiological (e.g., activation of the sympathetic nervous system) and behavioral (e.g., poor adherence) mechanisms mediate the link between anxiety and poor outcomes, and are testing this hypothesis. Research in this area is important to help clinicians determine the best ways to manage patients to decrease the adverse effects of anxiety. It is also vital to develop and test interventions that both decrease anxiety and improve the adverse outcomes associated with anxiety. In this regard, the role of nonpharmacological and pharmacological strategies must be investigated. Ultimately, the research program's goal will be realized if all clinicians and nurses realize the importance of anxiety to their patients' outcomes and seriously engage in the assessment and management of anxiety.

## Funding

No funding.

## Conflicts of interest

The author declares no conflict of interest to declare for publication.

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