COMMENTARY

Cardiovascular Disease, and Cardiac Rehabilitation

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Introduction

I have always thought that patients with cardiac disease are somewhat depressed or anxious about their lives. Thus, I thought it worthwhile to express my views on the value of "Cardiac Rehabilitation" on patients who are depressed or anxious. I like the definition of Depression proposed by Medicine Net. They define Depression as "An illness that involves the body, mood, and thoughts and that affects the way a person eats, sleeps, feels about himself or herself, and thinks about things".

As a clinical cardiologist taking care of patients with acute and chronic cardiovascular disease, I get the impression that all or at least, most of my patients with myocardial ischemia, i.e. stable ischemic heart disease, unstable angina, acute myocardial infarction, or heart failure of any etiology have some form of a psychiatric condition, e.g. depression or anxiety that relates to a concern about their ability to function in society as they did in the past.

What is Cardiac Rehabilitation?

It is important to remember that rehabilitation is a multi-pronged attack on cardiac and vascular disease, beginning with exercise and including the modulation of other risk factors. The purpose of cardiac rehabilitation is to improve patient outcome by regular rehab sessions over an extended period

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of time. By improved outcome it is meant that the patient has a better quality of life, e.g. an increase in their ability to participate in activities of daily living, and possibly prevent or at least delay future cardiac events. Our approach is related principally to exercise, but other factors must be considered as well, e.g. smoking cessation, weight control, diabetes control, blood pressure control and lipid management [1].

Rounds in the Cardiac Rehab Unit

I make rounds every day in the Rehabilitation Unit, and although I do not spend time with the patients, I do talk with the staff personnel in the Unit and I have questioned them about the patients for whom they are responsible. Uniformly, they indicate that patients come to the unit, somewhat apprehensive and "Down in the dumps" about their future. But after a few rehab sessions, staff indicates that the patients have a different outlook on their future. The staff evaluates each patient, not only related to exercise but also about diet, smoking cessation, blood pressure control and any other problem they are having.

Data Collection

Staff collects data on these patients that correlates with the patients' opinion of their condition. After a few rehab sessions with the staff, the patients are now confident that they can exercise at a better level than when they first appeared in the unit. The staff also notes improvement in attitude and decrease in

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anxiety and depression. As far as I know, no one has died during their "Rehab therapy" and no one has been given any drugs other than that prescribed by their personal physician.

Pharmacologic Therapy

Many of these patients are being treated with pharmacologic agents. This in itself is a concern because of drug-drug interactions. Certain drugs e.g. **SSRI's** may cause arrhythmias or hypotension, or even bleeding associated with ASA or clopidogrel ingestion; **TRICYCLICS** may cause QT prolongation and may precipitate arrhythmias; **SNRI's** which may increase serotonin and norepinephrine and cause hypertension [2].

Exercise and Decreased Depression

There is very little in the literature about the relationship of cardiac rehabilitation and decreasing depression or anxiety in patients with chronic CV disease. However, Blumenthal and colleagues reported that "exercise is often related to improvements in depression" [3]. In the HF-ACTION trial, which randomized patients with heart failure with reduced ejection fraction to exercise training or control, there was a modest decline in depression at 3 months.

Cardiac Rehabilitation and Prolongation of Life

Despite the fact that cardiac rehabilitation reduces disability and as a result may prolong life, there are very few hard data to indicate that exercise rehabilitation alone prolongs life. Although, I must admit, if the composite of increased exercise, BP control, lipid control, smoking cessation, weight reduction and diabetes control is accomplished in the cardiac patient, prolongation of life may result.

According to those working in the Rehab field, cardiac rehabilitation, which is mainly focused on gradually increasing exercise, there is alleviation of some of the fears that patients may have about activity at work or at play. If cardiac rehab does that, then it has accomplished a great deal in the individual patient and it may prolong life.

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