Emotional and Physical Rehabilitation Protocol for Patients Undergoing Permanent Cardiac Pacemaker Implantation

Thesis

Submitted for Partial Fulfillment of the Requirements of
Doctorate in Nursing Science Degree
Psychiatric/Mental Health Nursing

By

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List of Abbreviations

AV node	: AtrioVentricular node
BACR	: British Association for Cardiac Rehabilitation
CCU	: Coronary Care Unit
CHB	: Complete Heart Block
CHD	: Coronary Heart Disease
CR	: Cardiac Rehabilitation
ECG	: ElectroCardioGram
HB	: Heart Block,
HD	: Heart Disease
HM	: Heart Manual
ICD	: Implantable Cardioverter–Defibrillators
MHLNs	: Mental Health Liaison Nurses
MRI	: Magnetic Resonance Imagination
PM	: Permanent Pacemaker
PTCA	: Percutaneous Transluminal Coronary Angioplasty
SA node	: SinoAtrial node
SDHB	: Second Degree Heart Block
SSS	: Sick Sinus Syndrome
SVT	: SuperaVentricular Tachycardia
TDHB	: Third Degree Heart Block

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Abstract

The aim of the study is to investigate the effect of emotional and physical rehabilitation protocol for patients undergoing permanent cardiac pacemaker implantation. **This study** used a quasi experimental design. **The study** was carried out at the inpatient and outpatient cardiac clinic, in Nasr City Health Insurance Hospital. All patients undergoing permanent cardiac pacemaker implantation at Nasr City Health Insurance Hospital along were the target of this study. **The tools** used for data collection were: Taylor Manifest Anxiety Scale to measure the degree of patients' anxiety, Beck Depression Inventory Scale to measure the degree of patients' depression and a questionnaire to assess the physical needs of the patients. **The main findings** of the study were: There was no statistically significant difference between control and study groups before rehabilitation protocol implementation. There was a high statistically significant difference between control and study groups after rehabilitation protocol implementation regarding emotional and physical needs or knowledge for patients undergoing permanent cardiac pacemaker implantation. **The study recommended,** conduction of further studies in order to assess the effectiveness of emotional and physical rehabilitation protocol applications on patients outcome regarding different cardiac disorders with replication of this study on a larger probability sample from different geographical locations in Arab Republic of Egypt.

Operational Definitions

Protocol	Means a series of actions (which may include a number of medications) that may be implemented to manage a patient's clinical status. A protocol allows the application of specific interventions to be decided by the nurse based on the patient meeting certain criteria outlined in the protocol as long as the intervention is within the scope of practice of the nurse. A protocol including alternative actions or exceptions to the prescriptive orders, that, allows for patient circumstance to be assessed by the nurse. These exceptions are addressed by application of an algorithm that is a step-by-step procedure for solving a problem or accomplishing the intervention. An agency may, if it chooses, have protocols that are developed by authorized practitioners and are designed to standardize and optimize patient care in accordance with current clinical guidelines or standards of practice.
Rehabilitation	Rehabilitation is a treatment or treatments designed to facilitate the process of recovery from injury, illness, or disease to as normal a condition as possible. Patients participate in rehabilitation either by going to inpatient sessions for a certain amount of time or visiting the facility on a daily basis for visits until he or she no longer needs the therapy.
Cardiac Rehabilitation:	Rehabilitation of cardiac patients is the sum of activities required to influence favorably the underlying cause of the disease, as well as the best possible physical, mental and social conditions, so that they may benefit by their own efforts preserve or resume as normal a place in the community

Psychological Rehabilitation:	Psychological rehabilitation is the process of facilitating an individual's restoration to an optimal level of independent functioning in the community. While the nature of the process and the methods used differ in different settings, psychological rehabilitation invariably encourages persons to participate actively with others in the attainment of psychological health and social competence goals. Psychological rehabilitation is frequently defined as the activity of a set of specialist services. An alternative formulation would be in terms of the needs or characteristics of people who would benefit from rehabilitation interventions, as 'people with severe and long-term emotional problem who have both active. symptomatology and impaired social functioning as a consequence of their mental illness'.
Physical Rehabilitation:	One of the many different types of rehabilitation program is a physical therapy that helps people regain use of a body part that was injured or that sustained deterioration from a medical condition. During physical therapy, a physical therapist tries to decrease the amount of pain the person has, as well as improve function and mobility. The therapist also develops a treatment plan consisting of exercise, hot and cold massages and nerve stimulation therapy. Some individuals require extensive physical therapy for many months such as those who have hurt several body parts from being in an accident
Liaison psychiatric nurse:	Liaison psychiatric nurse, also known as consultative psychiatry or consultation-liaison psychiatric nurse is the branch of psychiatry that specializes in the interface between medicine and psychiatry, usually taking place in a hospital or medical setting. The role of the consultation-liaison psychiatrist is to see patients with co morbid medical conditions at the request of the treating medical or surgical consultant or team.

Introduction

Normally the heart generates its own electrical currents allowing it to beat at various rates according to the daily needs. When show blocks in the pathways through which the current flows (heart blocks) are helped by using a small battery operated devices is called artificial pacemaker which stimulates the heart ***(Kusumoto & Goldschlger, 2011).***

Artificial cardiac pacemakers are electronic device that deliver electrical stimulation to the heart. They are utilized in the treatment of cardiac bradycardia and tachycardia that are caused by an alteration in the normal electrical pathways in the heart. Artificial pacemakers sending out tiny electrical impulses down through a lead to the heart muscle that receives the electrical signal to contract ***(Wilkoff, 2011)***.

Patients undergoing cardiac pacemaker implantation may experience anxiety and significant symptoms of depression due to fears and worries about surgery itself surgical outcomes and any complications following surgery as pain or discomfort and their ability to return to normal life and work **(*Miller, 2009).***

From another point of view ***Kutalek and Maquilan (2012)*** patients perceive the device as an electronic security as a source of physical and emotional discomfort; it was found that the possible loss of the function of body senses causes a major threat to perception of body image. Introducing a foreign body

into the heart may cause a change in body image that, causes problems in psychosocial adaptation and contribute to development of affective disorders ***(French & Phillips, 2012).***

Intense emotions such as anxiety, anger, elation and depression are accompanied by predictable increases in heart rate and blood pressure. The interaction of heart and psyche is bi-directional ***(Kawachi, 2009).*** According to ***Scheier (2011)*** emotions and stressful experiences affect the heart directly through the autonomic nervous system, and indirectly through neuro-endocrine pathways. Clinicians dating back to Sir William Osier have observed that a surprising number of Heart Disease (HD) patients seem to be compulsive, driven, overachievers, and are unable to relax and quick to feel angry and frustrated when things do not proceed as planned.

Patients with anxiety and depression can experience physical symptoms including; headache, dizziness, nausea, muscle weakness, fatigue, sweating, and difficulty to fall asleep or even more intense symptoms such as chest pain, palpitations, shortness of breath. These can exacerbate symptoms of existing cardiovascular disease which adversely affect physiological parameters before and during any procedure and may result in prolonged recovery period ***(Roll and Theorell, 2010).***