

Psychosocial Adaptation and Quality of Life Differences Between Pacemaker and Implantable Cardioverter-Defibrillators in a Sample of Egyptian Patients

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Background: The use of ICDs in cardiac patients have been expanding in recent years with consequent decreased mortality risk 30% to 54% by decreasing the incidence of sudden cardiac death. After implantation of an ICD, patients face a lot of psychological problems, whereas patients with pacemaker implantation face less problems. These differences would be expected to influence the patients' perception of the implants and their appraisal of their quality of life.

Objectives: To study the differences between the two devices regarding health related quality of life, anxiety and depression in the ICD group compared with the pacemaker group for better management.

Subjects & Methods: 35 patients were selected successively in a comparative

cross sectional study, having a pacemaker (n= 21) and ICD (n= 14) implanted between 2000 and 2007 at the Kaser EL-Eini Hospital Cairo University, critical care department pacemaker and ICD follow up clinic. The patients were assessed using Quality of life Scale, Symptom checklist 90 (SCL90), Middle sex Questionnaire, Beck rating scale for depression, Coping with life stressor scale and life satisfaction scale.

Results: The ICD patients showed higher rates on the Somatization, depression, anxiety, hostility, phobia and paranoid symptoms than the pacemaker group. Life satisfaction scales were higher in the pace maker group than the ICD patients. Quality of life were higher in the pace maker group in the mood, financial and self scales.

Keywords: QOL, Pacemaker, ICD.

Abbreviations:

ICD: Implantable Cardioverter Defibrillation
 QOL: Quality Of Life

SCL90: Symptom Checklist 90
 BDI: Beck Depression Inventory

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INTRODUCTION

Use of implantable cardioverter defibrillators (ICDs) has become the standard of care for patients at high risk for life-threatening ventricular arrhythmias. Compared with other available treatments, in clinical trials, ICDs have had a consistent, superior effect on mortality (Goldberger and Lampert, 2006). In high-risk patients with cardiac disease, use of the devices decreased mortality risk 30% to 54% by decreasing the incidence of sudden cardiac death (Greenberg, et al. 2004).

Indications for the use of ICDs have been expanding in recent years following the publications of several large multi-centre trials and now include preventive implantation for patients with coronary artery disease and a severely depressed ejection fraction (Moss, et al. 2002). This has resulted in increased implantation rates and thus steadily growing numbers of ICD recipients worldwide (Seidl and Senges, 2003).

The purpose of an ICD is to monitor cardiac rhythms and deliver therapy in the form of anti-tachycardia pacing, cardioversion or defibrillation. Cardioversion and defibrillation involve delivery of an unexpected jolt that can cause a variety of sensations varying from

a tingle, touching an electric fence or being kicked in the chest (Dunbar, 2005). At the same time, concerns remain regarding the quality of life (QoL) of these patients. Small observational studies have indicated a poor QoL for ICD patients (Gallagher, et al. 1997).

More recent studies have generally shown a similar or even better QoL among ICD patients not receiving shocks than patients treated with drugs, but QoL scores decreasing with increasing numbers of shocks received from the device (McCready and Exner, 2003).

Clinicians are usually unaware of the psychosocial impact of implanted pacemakers and ICDs. After implantation of an ICD, the most common psychological problems are anxiety, depression, anger and fear. Patients fear that they will be shocked by the device, that the device will not work, that they may die and that physical activity will trigger the device (Sears, et al. 1999).

Taking these factors into account, it is quite possible that the device itself may provoke anxiety and thus result in reduction of the QoL of ICD patients.