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PSYCHOLOGICAL DISTRESS IN PATIENTS AWAITING HEART TRANSPLANTATION

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Abstract—Heart transplantation has become an established procedure for the treatment of terminal heart failure. However, due to a shortage of donor organs, the waiting period for a donor organ is increasing. Cross-sectional and retrospective studies have indicated that there is tremendous psychological distress during this waiting period. The aim of this study was to assess this phase systematically and longitudinally. At the beginning of their waiting period, 62 patients at the Heidelberg Transplantation Centre were examined with regard to their physical complaints, quality of life, and level of depression. Four months later the remaining 42 patients were re-examined. The sample showed a significant increase ($p<0.001$) in subjective physical symptoms and an impairment in social activities ($p<0.05$) and everyday life ($p<0.05$), and a significant increase in depression ($p<0.001$), despite the relatively short time period. These results show the necessity of supportive psychotherapy for patients undergoing heart transplantation. © 1998 Elsevier Science Inc.

Keywords: Depression; Follow-up study; Heart transplantation; Psychotherapy; Quality of life.

INTRODUCTION

For patients suffering from terminal heart failure, orthotopic heart transplantation has become an established means of treatment. By the end of 1995, 34,300 heart transplantations [1] had been performed in 271 transplantation centers.

Given that the acute surgical and immunological problems of the transplantation procedure have been largely resolved, interest in the psychosocial implications for the patient and the patient's immediate environment has intensified. A number of studies have shown a considerable improvement in quality of life after successful heart transplantation [2–5]. However, studies concerning the psychosocial aspects of the preoperative phase [6–8] have demonstrated enormous distress in the patient and his environment prior to the operation. Considering that, during the waiting period, a majority of patients experience a marked worsening in their physical condition and 30% of patients die, it is not surprising that, in earlier studies [9], a prevalence of over 35% for anxiety disorders and over 20% for depression has been found.

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The already stressful situation for patients on waiting lists has grown worse in recent years due to the rising demand for organs and a coincidental stagnation or even decline in public willingness to provide them. As a consequence, the waiting period has lengthened and patient survival rate has decreased [10].

With the exception of a recently published study in children awaiting heart transplantation [11], the psychosocial stressors of the waiting period have only been examined in cross-sectional studies [12]. The objective of this study was to assess the psychosocial functioning of patients treated at the Heidelberg Transplantation Centre using a follow-up design.

The present study aimed to answer the following questions:

1. What course do depression, quality of life, and physical symptoms take during the waiting period for a heart transplant?
2. Which psychological parameters can identify patients who require more intense psychotherapeutic care for severe depression during their waiting period?

METHOD

Subjects and procedure

From August 1995 to December 1996, all patients on the waiting list for heart transplantation at the Heidelberg Transplantation Centre were included in the study. Inclusion criteria for the study were: a minimum age of 18 years, sufficient command of the German language; and no bridging with an artificial heart.

The first evaluation (T0) took place after the patient was listed for a heart transplantation, and the second evaluation (T1) took place after the patient had been on the waiting list for 4 months.

Altogether, there were 62 patients evaluated at T0. Eight of them received transplants during the waiting period, four died, six refused participation, and two provided inadequate data (refusal rate of 16%). In total, 42 patients could be completely evaluated over the 4-month period.

Approximately half the patients presented with a dilatative cardiomyopathy ($n=22$; 52.4%), and the other half with ischemic cardiomyopathy ($n=20$; 47.6%).

Psychological assessment

In addition to a short questionnaire concerning sociodemographic data (see Table I) there were three more questionnaires administered at T0 and T1.

(a) The Zerssen depression scale [13] is a one-dimensional questionnaire consisting of 16 items used for the self-evaluation of the patient's depressive mood.

(b) To assess quality of life, the "Münchner Lebensqualität Dimensionen Liste" (MLDL), developed by Heinisch et al. [14] was used. It measures the cognitive evaluation of elemental areas of life. Nineteen items on four scales evaluate the quality of life in the areas of physical and emotional well-being, social life, and everyday life.

(c) The frequently used and well-documented Giessen Complaints Schedule (GBB) [15], by Brähler and Scheer, explores the subjective limitations experienced by the patients due to their physical symptoms. The questionnaire comprises 57 items that evaluate the areas of stomach ache, arthralgia, cardiac symptoms, and exhaustion. A total score from all four scales reflects the individual's level of personal stress caused by physical symptoms.

Statistical analysis

All statistical analyses were carried out using the SAS System for Windows, release 6.11 (SAS Institute). To ascertain how level of depression, quality of life, and physical symptoms would develop during the waiting period for heart transplantation, a paired *t*-test was performed. To explain which parameters at the beginning of the waiting period (T0) would best predict the level of depression after 4 months of waiting (T1), a multiple-regression analysis was conducted. The level of depression, the four scales concerning quality of life, the four subscales pertaining to physical symptoms, as well as the patient's age served as predictive parameters (all at T0).