Quality of life in renal transplant patients: impact of a functioning graft

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Abstract
Objective measures to evaluate quality of life are gaining importance as an adjuvant in assessing therapeutic interventions. The study purpose was to compare quality of life in renal transplant patients with functioning graft and those who restarted dialysis after graft loss. Quality of life was measured using the World Health Organization Quality of Life questionnaire (WHOQOL-Bref). One hundred and thirty two patients were interviewed, and divided into two groups: group I, 100 patients on regular follow-up in outpatient clinics and stable graft functioning; and group II, 32 patients who restarted dialysis after graft loss. The WHOQOL-Bref showed better quality of life in those renal transplant patients with a functioning graft, especially regarding the physical and psychological domains assessed in the general questions. There were no differences between the groups in the social relationship and environmental domains. WHOQOL-Bref is an efficient tool and can be useful for better approaching these patients, not only on a medical basis.

INTRODUCTION

Objective measures of life quality have become an adjuvant tool in the analysis of therapeutic interventions and individuals' level of satisfaction with their health and treatment.[5]

The World Health Organization defined quality of life as "*the individual's perception of their life status concerning the context of culture and value system in which they live and their goals, expectations, standards, and concerns*".[1] It is thus a concept that entails several meanings and relates to the individual's level of satisfaction in different spheres of life.[4]

Quality of life can be assessed using both general and specific instruments.[4] The measure of quality of life in chronic degenerative disease patients has been investigated in recent years aiming at defining the changes needed for improving these patients' well-being and adequacy of their rehabilitation.[2,5]

The purpose was to assess quality of life in a population of chronic renal transplant patients.

METHODS

The study population comprised of a sample of 132 subjects who underwent renal transplant in a university hospital between 1984 and 2001 (N=1.000), regardless of kidney donor type (cadaveric or living-related donor). Transplant subjects were divided into two groups:

Group I – transplant subjects with a functioning graft followed up on an outpatient basis (N=580).
Group II – transplant subjects who restarted dialysis after graft loss (N=420). Of all, 180 subjects were not included in the study because they died and 60 subjects were either lost to follow-up or aged less than 18. Only 180 were undergoing dialysis.

The World Health Organization Quality of Life (WHOQOL-Bref) questionnaires were applied from

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September to December 2002. Sampling was carried out according to the usual order subjects attended their visits in the renal transplant outpatient clinic of the Nephrology Unit. A proportional rate sampling was applied to both subgroups, i. e., as a given percentage of subjects who loss graft was reached, the same percentage of subjects with functioning grafts had to be interviewed. The sampling process was stopped at 17% rate, which was considered to be adequate for the study.

In Group I, there were interviewed 100 renal transplant patients (65 males and 35 females, mean age 40±10 years) followed up on an outpatient basis, making up to 17% of all outpatients (N=580) in the Unit.

Group II consisted of 32 subjects who restarted dialysis after graft loss (12 males and 20 females, mean age 39±11 years), making up to 17% of the target population (N=180).

Inclusion criteria included: literacy, no severe cognitive impairment, and agreeing to sign an informed consent form.

The instrument used to assess quality of life was the WHOQOL-Bref questionnaire, Portuguese version,[1] which comprised of 24 questions on the following domains: physical, psychological, social and environment relationships and two general questions. Each domain was assessed separately and higher scores represented better quality of life.

Statistical analysis was conducted using the SPSS software program including the instrument's specific syntaxes and modified scores from four to 20. Each domain score medians were compared between the two groups at a 5% significance level.

The study was approved by the University of Campinas School of Medical Sciences Research Ethics Committee.

RESULTS

The group comparison showed no significant difference for the following variables: age, marital status, donor type, schooling, employment, and income. The Chi-square test ($p<0.05$) showed that only gender and occupational status were significantly different in both groups.

Median analysis of the questionnaire's specific domain scores revealed better scores for the physical domain (15.4 *vs* 13.7; $p<0.05$) and borderline significant values for the psychological domain (16.0 *vs* 14.3; $p=0.05$) in the functioning graft group. However, there was no significant difference for the domains social (16.0 *vs* 14.7; p=ns) and environment relationships (14.0 *vs* 13.0; p=ns).

The assessment of general questions, "*How do you rate your quality of life?"* and *"Are you satisfied with your current level of health?*" showed global higher scores for the functioning graft group (16.0 *vs* 14.0, $p<0.05$) as expected.

DISCUSSION

As expected, the assessment of quality of life using the general WHOQOL-Bref statistically corroborated the notion that renal transplant patients with functioning grafts have a better quality of life when compared to those who restarted dialysis after graft loss. The instrument has proved to have good discriminant validity.

Bearing in mind that, as renal failure advances, patients start to have more symptoms that interfere with their daily activities, more advanced stages of renal disease could directly impact in the individual's perception of their quality of life. Likewise, the dialysis therapy (either hemodialysis or continuous ambulatory dialysis peritoneal, CAPD) has also an impact on the assessment of patients' quality of life since not all symptoms are eliminated with treatment. Renal transplant, advocated as a treatment that would assure the individual to be back to their daily activities can also be associated with not very satisfactory scores of quality of life, particularly in those individuals experiencing acute graft rejection or adverse events resulting from immunosuppressive therapy.[6] Another factor to bear in mind is that after the introduction of more powerful immunosuppressive drugs, patient and graft survival has increased creating a new set of chronic rejection patients who restart dyalisis.[5] Restarting dialysis can also have a negative impact on the assessment of quality of life, particularly in those who used to be active transplant patients. On the other hand, those individuals who had frequent complications after their transplant may see restarting dialysis as a way of improving their quality of life.[3] Thus, the authors believe that the best approach to these patients is applying serial questionnaires for assessing quality of life to allow for therapy adequacy and a multidisciplinary approach, and defining specific preventive programs to each particular group aiming at improving their quality of life. Serial questionnaire application could be also a way of assessing these programs' efficacy.

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