Original Research Article

Analysis of quality of life in kidney transplant recipients

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Abstract

Background: This was a cross-sectional single cantered study carried on in 52 patients who had undergone renal transplantation before not less than a year ago.

Aim and objectives: Study aimed to measure HRQOL (Health related quality of life) after transplantation in socio-demographic, clinical and psychological aspects.

Materials and methods: Materials used for assessing QOL were a generic questionnaire and SF-36 health survey. Components from KTQ were also included in questionnaire. Patients who visited Govt. Stanley Hospital Nephrology OP clinic for follow up after transplantation were requested to give an interview through which the above mentioned questionnaires were completed.

Results: Univariate analysis in our study showed significant correlation for the variables female sex, unemployment, not doing same job after transplantation, high blood pressure, side effects related to general health and mental health. Multivariate regression analysis revealed side effects related general health and mental health were significant.

Conclusion: Socio-demographic factors such as female gender, unemployment, not doing same job as before transplantation influence quality of life in our group of patients. Among the medical characteristics, systemic hypertension is the most common predicting factor. Side effects in general health and mental health significantly affect quality of life.

Key words

Renal transplantation, Health related quality of life, Short form, Kidney transplant questionnaire.

Introduction

Evidence of increase in incidence of ESRD in the last decades justifies the need for careful examination of treatment modalities suggested for it. Renal transplantation and hemodialysis are the main treatment options available for end stage renal disease. Newer developments in the field of medicine allow kidney transplantation to achieve far higher success rates. Kidney transplants are the most commonly performed organ transplantation with promising outcomes Transplantation is preferred over dialysis, because it provides good health outcomes and better quality of life. Renal transplantation, now believed to provide considerable improvement in health related quality of life (HRQOL). Together with mortality, morbidity and cost utilization it has become one of the major indicators of medical care [1-3].

Aim and objectives

This study aimed to measure health related quality of life after kidney transplantation in socio-demographic, clinical and psychological aspects. This included measuring their physical health, mental health, social involvements and job rehabilitation.

Materials and methods

This was a cross-sectional single centre study carried in 52 patients who had undergone renal transplantation before not less than a year ago. Group A was 1-6 years post-transplant, Group B was more than 6 years post-transplant. Materials used for assessing QOL were a generic questionnaire and SF-36 (short form) health survey. Study period was 2 months (august and September of 2015). Patients who visit Govt. Stanley Hospital Nephrology OP clinic for follow up after transplantation were requested to give an interview through which the above mentioned questionnaires were completed. The study started after obtaining institutional ethical committee clearance and written informed consent from the subject. Statistical analysis was performed.

Results

Mean age was 36.25 years, Male 34 cases, Female 18 cases where more than 50% of the employed ones were quit their previous job and were doing a different one. Hours working per day were also reduced. Prevalence of high BP in this study was 57.7%. Order of incidence of infections (38.5%) among transplant recipients were Respiratory tract > Gastro Intestinal tract > Urinary tract. Apart from severe infections, another indication which needed hospital admission was graft dysfunction (40.4%). Most of them followed immunosuppressive regimens strictly. General health problems presented as tiredness > pain > muscular weakness > lower limb edema. Mental health problems present as sleep disorders>anxiety >depression. Changes in body modification was in the order of weight gain > facial change > hair loss.

In SF-36 score (**Table - 1**), Physical health components, Bodily pain got highest value (group B), lowest value was for role physical (group A). In Mental health components, social functioning got highest value (group B) whereas group A had lower score for role emotional by Univariate analysis (**Table - 2**).

Our study showed significant correlation for the variables female sex, unemployment, not doing same job after transplantation, high blood pressure, side effects related to general health and mental health. Multivariate regression analysis (**Table - 3**) revealed side effects related general health and mental health were significant.

Discussion

All The 52 participants were aged above 18.Age has clearly defining properties to decide the quality of life [1]. Age is the best explored variable, and the majority of studies found higher age to be the most important negative predictor of perceived health status [2-5]. Major portion of the study population (44.2%) were aged between 30 and 40.Mean age for the population is found to be 36.25. In one study a predominance of

young adult patients aged up to 35 years (50.8%) and the mean patient age was 38.9 years (SD=12.9) [6, 7]. The results are less clear for gender. The study made by Wight, et al., who compared Cohorts of 292 dialysis and 228 transplanted patients, found Female gender to be connected with worse physical functioning in kidney transplant recipients [2]. In our study, similar results were obtained Perceived ability to

work was assessed by a single question developed by Evans, et al. [8] in a study. There is a significant fraction (23.21%) who engaged more than 8 hours for work a day. Another study points to the same result as that of this Regardless of their transplant source, more patients perceived themselves as able to work either full- or part-time than were actually working [9] (ns235, 69.5% vs ns193, 56.8%).

Table - 1: SF-36 score.

	Dimensions	Overall	<6 Years[A]	>6 Years[B]
Physical health	**Physical functioning**	54.52±26.35	56.85±23.94	52±29.01
	Role physical	51.44±31.86	47.22±30.49	56±33.29
	Bodily pain	80.48±20.57	78.7±19.26	82.4±22.14
	General health	55.1±14.5	56.11±16.49	54±12.25
	Physical component summary (PCS)	56.54±16.28	56.92±17.65	56.13±15.01
Mental health	**Role emotional**	61.54±33.26	59.26±31.12	64±35.9
	Vitality	64.42±17	63.89±18.47	65±15.61
	Mental health	63.77±15.33	62.96±16.92	64.64±13.7
	Social functioning	75.72±19.87	72.22±19.41	79.5±20.05
	Mental component summary (MCS)	65.19±14.98	63.76±15.3	66.73±14.78

Table – 2: Univariate analysis.

VARIANT	β COEF.	[95% CONF.INTERVAL]	P-VALUE
Female	-3.03	[-10.46;4.40]	0.42
Unemployed	-0.70	[-11.73;10.33]	0.90
Not doing same job	-6.57	[-13.86;0.72]	0.08
High BP	-5.99	[-13.35;1.37]	0.11
Side effects related to General health	-8.31	[-14.92;-1.69]	0.02
Side effects related to mental health	-8.52	[-14.88;-2.17]	0.01

Table – 3: Multivariate analysis.

Variant	β COEF.	[95% CONF. INTERVAL]	P-VALUE
Side effects related to General health	-8.31	[-14.92;-1.69]	0.02
Side effects related to mental health	-8.52	[-14.88;-2.17]	0.01

This study showed several significant associations between HQoL and socio demographic and psychological variables. An increasing number of comorbid conditions correlated with decreasing HQoL scores. A study emphasizes that co-morbid conditions be associated with poor health status [10]. Griva, et al. used the SF-36 questionnaire and found higher income to be a predictor of a better mental component [11]. The present study was

compared with results of a national survey in France [12].

Conclusion

Socio-demographic factors such as female gender, unemployment, not doing same job as before transplantation impacted our group of patients. Among the medical characteristics, systemic hypertension was the most common

predicting factor. Side effects in general health and mental health significantly affected quality of life.

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