



Effect of patient counseling on health related quality of life among end stage renal disease patients undergoing hemodialysis

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ABSTRACT

Quality of life of patient is being potentially affected at End stage renal disease (ESRD). Patient counseling will be an effective way to improve the multi-dimensional concept, health related quality of life (HRQOL) of hemodialysis patients by increasing the knowledge and awareness about the disease and its management. The objective of the present study was to assess the consequence of patient counseling on Health Related Quality Of Life among hemodialysis patients with End Stage Renal Disease. The study was conducted in the nephrology department of KIMS ALSHIFA hospital, a 750 bedded multispecialty tertiary level referral hospital situated in Perinthalmanna, Malappuram district of Kerala. This was a prospective pre-post intervention study carried out over a period of six months. 50 hemodialysis patients meeting the inclusion and exclusion criteria were provided with patient information leaflets and counseling at regular intervals. KDQOL SF TM questionnaire was given to patients before and after counseling to evaluate the impact of patient counseling and to assess their HRQOL. Statistically significant improvement was seen in all three QOL components after patient counselling at 5% level of significance. The increase in QOL scores was highly significant in case of physical and kidney disease components (P value <0.001). Pharmacist counseling was found to be very effective and there was improvement in all the three components of HRQOL after counseling. The study suggests that the counseling by a clinical pharmacist at regular intervals can improve the HRQOL.

INTRODUCTION

Chronic kidney disease is a slow progressive loss of renal function over a period of several years that requires nursing and medical intervention. [1] According to the 2010 Global Burden of Disease study, CKD was ranked 27th in the list of causes of total number of global deaths in 1990, but rose to 18th in 2010. [2] Treatment of chronic kidney disease cause significant developments in daily lives of patients, and affects self-perceived quality of life, an important marker of disease burden which can be used to predict risk for adverse outcomes and to assess treatment effectiveness.[3] Health-related quality of life (HRQOL) raises to the measure of a patient's functioning, well-being, and general health perception that are related to physical, psychological, and social domains. More with survival and other types of clinical consequences, patient quality of life (QOL) is a significant indicator of the effectiveness of the health care they receive. QOL of end stage renal disease patients is influenced by the disease itself and by the type of replacement

therapy. Several studies have established the effect of such factors as age, anemia, comorbidity, and depression on QOL. [4]

The Kidney Disease Quality of Life Questionnaire Short Form (KDQOL-SFTM) has become the most extensively used QOL measures considering CRF patients[5],[6],[7] It is a self-report device that includes the Medical Outcomes Study Short Form-36 generic core and several multi-item scales targeted at QOL concerns of special relevance for patients with CRF. The KDQOL-SFTM has been developed for dialysis patients and has been translated into several languages. Routine HRQOL supervising would both improve communication between the patients and the managing team and is profitable in the assessment of patient's needs.

Large portion of the patients with CKD are slightly active, physically [8] and have undesirable eating habits, i.e. as high consumptions of energy, salt, saturated fat and alcohol, and low intakes of fruits, vegetables, and fiber. Hence, it is significant to motivate the patients with CKD to adopt healthier diets, to

decrease alcohol consumption and to increase physical activity. [9] If people lack knowledge about how their lifestyle habits affect their health, they have little reason to change their behavior. The motto behind 'behavior changes' is to inculcate the habit of adequate exercise which can be accomplished only through personal motivation.^[10] There is limited evidence about the use of such educational interventions in other areas of kidney disease. Patient counseling given by pharmacist possesses a positive impact on health and it helps the patients to improve medication adherence which is a salient factor in analyzing the health outcome. [11] The disease such as ESRD can have a greater impact on patients' quality of life, potentially affecting their functional status, physical and mental health, independence, and social functioning. Since the ESRD patients have several other disorders such as hypertension, diabetes mellitus, hyperlipidemia, etc., and dragged for polypharmacy. Hence, the patients are more prone to noncompliance and all will affect the quality of life. [4] Patient counseling will be an effective way to improve the quality of life of hemodialysis patients by increasing the knowledge and awareness about the disease and its management. This would also nullify their misconception and worries on their disease state as well as by removing the worries and misconceptions regarding patient's disease state. [12] This research aimed to evaluate the effect of patient counseling on health related quality of life among hemodialysis patients.

MATERIALS AND METHODS

A prospective, cross-sectional descriptive study was undertaken over a period of 6 months in the dialysis unit of a tertiary level referral hospital in Kerala. Patients who had undergone at least three months of maintenance hemodialysis, and comprised of aged 18 years and above of either, sex were involved in the study. The patients who had voluntarily withdrawn from dialysis and those who have any major surgical interference in the previous three months, malignancies, tumors, cognitive impairment, dementia, active psychosis, and major hearing impairment were excluded from the present study. In the course of commencement of study a total of 84 ESRD patients were undergoing hemodialysis on a regular basis in the dialysis unit. From which 50 patients those who satisfied the study criteria were included. The nature, type or intention of the study was explained to the participants and given at least twenty four hours to decide whether or not to participate. A written consent was collected from them former to their conscription in the study. The socio demographic details of the patients were composed using a semi organized questionnaire and the details were collected through patient and bystander interview and also from case records. The patients were given with the standard questionnaire, KDQOL-SFTM version 1.3, to measure the Health Related Quality Of Life. It includes generic and disease related cores. The items that form the generic core of KDQOL-SF version 1.3 are those constructed for SF-36 version 1 (19). Mental and Physical Component Summary reported the eight scales of SF-36 generic core results as physical functioning, general health, role-physical, bodily pain, vitality, mental health, role-emotion and social functioning. The results of kidney disease cores include eleven scales which make kidney disease component summary are effects of kidney disease on daily life, symptoms/problems, burden of kidney disease, work status, cognitive function, sexual function, sleep, patient satisfaction, social support, dialysis staff encouragement and quality of social interaction.

The questionnaire KDQOL-SFTM was generally self-administered, and the patients essentially filled out their

questionnaire at household or in dialysis area. The written information was double-checked with the patients to make sure that they completed the questionnaire properly and the baseline scores were taken. Extensive counseling was given to the patients. Patient information leaflet were prepared in both English and Malayalam and distributed among the patients, which included information regarding their disease, dietary habits, complications, medications, importance of adherence, life style modifications to be made etc. The patients were counseled at regular interval of 15 days. The health alert card identifying hemodialysis patients were also prepared and given along with Patient information leaflets. After providing repeated counseling, the same questionnaire was given again to the patients. By comparing the score values of patients before and after counseling, quality of life estimations were carried out by using Statistical Package for Social Sciences (SPSS) Software. The collected data were entered using Microsoft excel and were examined using SPSS version 20.0. To measure the quality of life difference before and after patient counseling, paired T test was used. The statistical significance of the study was assessed at 5% level of significance.

RESULTS

The quality of life of hemodialysis patients were assessed using KDQOL-SFTM questionnaire and paired-Specimen T test was performed to correlate the QOL rates before and after the counselling. Statistically significant improvement was seen in all three QOL components after patient counseling at 5% level of significance. The increase in QOL scores was highly significant in case of physical and kidney disease components (P value <0.001). Except pain and social function statistically significant improvement was seen in all other subscales after patient counseling, under substantial and mental factors summary respectively. In case of Kidney Disease Component Summary Score (KDCS) patient counseling showed a significant impact on burden and effect of kidney disease, cognitive perceivings, dialysis staff encouragement and patient satisfaction.

DISCUSSIONS

From the outcome of available investigations on assessment of QOL among hemodialysis patients, (Sathvik et al, Rostami Z et al, Abraham S et al,)[13], [14], [11] it is evident that the quality of life of them are highly impaired. Our study results were also accordant to the above mentioned studies. The low physical component score clearly explains impaired physical health status of the study population. Although the deterioration of the physical health status, the mental health of dialysis individuals is relatively protected. This was interpreted by superior adjustment of older patients to their chronic disorders, since 38% of our study population comprises of patients above 60 years. The research shows that patient counseling can boost health related QOL by improving awareness and abolishing the delusion about the disease process and its management. Statistically significant improvement was seen in all the three QOL components after patient counseling and the improvement in physical component and kidney disease component were highly significant (p <0.001). Patient counseling is mandatory and previous studies have shown that patient education provided better health outcomes, improved adherence and decreased health care cost. Various studies proved that patient counseling had shown positive impact on health and it decreased the morbidity and mortality (Sathvik et al, Abraham s et al). [13], [11] Our study could be compared with the work done by Abraham S et al and Thomas D

Table A1 : Impact of Patient Counselling on Hemodialysis Patients

COMPO-NENTS	SUBSCALES	BEFORE	AFTER	SIGNIFI-CANCE
PCS	Physical functioning	42.14±22.62	46.37±21.04	0.013
	Role-physical	13.57±28.11	13.57±25.25	0.003
	Pain	49.29±30.91	55.561±26.17	0.058
	General health perceptions	41.84±16.13	48.09±14.87	0.000
	Total	36.49±16.30	42.87±15.06	0.000
MCS	Emotional well-being	55.27±20.83	60.41±17.93	0.002
	Role-emotional	17.72±33.42	26.33±33.72	0.037
	Social function	49.24±24.79	54.34±23.04	0.070
	Energy/ fatigue	45.60±18.58	50.00±15.05	0.003
	Total	41.83±15.78	47.57±15.97	0.002
KDCS	Symptoms/ Problems	68.69±17.34	70.66±16.79	0.480
	Effect of Kidney disease	46.32±18.20	50.99±18.24	0.000
	Burden of kidney disease	33.50±19.31	39.37±21.02	0.004
	Cognitive function	61.86±27.80	69.19 ±23.98	0.000
	Quality of social interaction	67.56±27.34	68.35±25.04	0.581
	Sleep	65.20±22.27	66.93±19.83	0.315
	Social support	73.54±24.28	73.47±18.25	0.976
	Dialysis staff encouragement	72.85±14.59	78.25±14.69	0.001
	Patient satisfaction	54.80±21.98	63.79±18.45	0.001
	Total	60.48±11.81	64.56±11.81	0.000

et al, where the impact of patient counseling on QOL in patients of hemodialysis was found to be very effective. [11], [15]. A limitation of this qualitative research study was its duration with six month follow - up period. The outcome could have been much more authoritative if the follow up duration was two to three years. We have not altered scores with general population and confounding factors were not considered such as hemoglobin level, serum albumin, *etc.* Moreover further prospective case control studies are needed to precisely determine the effect of these. Hence, most measures were self-administered questionnaires that may be influenced by differences in respondent's attention, comprehension, motivation, and response biases, which can probably create measurement variation.

CONCLUSIONS

This study demonstrated highly deteriorated quality of life among end stage kidney disease patients undergoing hemodialysis. Hence it is clear from the results that the population

receiving long term therapies such as hemodialysis needs not only symptomatic relief but also the improvement in physical and mental health. Pharmacist counseling was found to be very effective and there was improvement in all the three components of HRQOL after counseling. The study suggests that the counseling by a clinical pharmacist at regular intervals can improve the HRQOL by bringing excellent awareness and in swiping off the misconception about the disease. The clinical pharmacist can also do the periodic assessment of HRQOL and it will help to provide counseling based on the individual needs. We recommend that patient counseling should be made mandatory by amalgamating clinical pharmacist in the nephrology team to make the patient understand the illness and lifestyle modifications.

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