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Research article

Assessment of quality of life and identifications of problems of patients undergoing haemodialysis through arteriovenous fistula in selected hospitals of Navi Mumbai

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Abstract

The term Quality of Life comprehends a wide range of indicators covering overall satisfaction with life in areas such as health, housing conditions, employment, safety, education, and leisure. In terms of health, the physical, social, and emotional impacts introduced by a disease and its treatment are considered. **Aim and Objectives:** The present study was aimed to assess the quality of life and identification of problems of patients undergoing haemodialysis through AV fistula in selected hospitals of Navi Mumbai. 1) To assess the quality of life of patients after haemodialysis through AV fistula 2) To identify the problems of patients after haemodialysis through AV fistula. 3) To compare the quality of life with selected demographic variables. **Methods:** A qualitative phenomenological approach was used on 100 patients undergoing haemodialysis through AV fistula fulfilling inclusion criteria selected by non –probability convenient sampling. Tool used was standardized SF-36 questionnaire. Findings revealed that there is significant impairment of quality of life in both physical domain and mental domain of patients undergoing hemodialysis. **Results:** The majority of the samples were in the group of 51-60 yrs (38%). Most samples were male (59%).in accordance to professional qualifications majority were educated till higher secondary (39%).and unemployed(36%).the majority of sample had income between 10,000-20000 (48%). The majority of the population performs physical activity (54%). In co morbidities majority of population was hypertensive (68%).followed by diabetes (47%). In majority of the population the duration of hemodialysis was thrice a week (39%). **Conclusion:** The result conducted on Assessment of quality of life and identification of problems of patients are undergoing haemodialysis through AV fistula in selected hospitals of Navi Mumbai. Revealed that quality of life of haemodialysis patients were significantly impaired. In this study the various parameters like age, gender, education, income activity, health habit, duration of haemodialyisis and number of times of haemodialysis were analyzed .the result shows that physical domains of hemodialysis patients indicate that they are more dependent on haemodialysis for survival and dialy activities were disturbed. Many of them were dissatisfied as they have negative feeling as anxiety and depression thus there is low score in psychological domain.

Key words: Quality of life, haemodialysis, arteriovenous fistula.

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1. Introduction

Dialysis is most commonly prescribed for patients with temporary or permanent kidney failure.

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People with end stage renal disease (ESRD) have kidneys that are no longer capable of adequately removing fluids and wastes from their body or of maintaining the proper level of certain kidney regulated chemicals in the bloodstream. For these individuals, dialysis is the only treatment option available outside of kidney transplantation. India gets 1.5 lakh (150,000) patients with kidney failures every year and a majority of them die within five years. Hemodialysis treatment is very expensive. The medicines are also equally costly

and a majority of the patients are not able to afford this treatment. Adding to the problem, health insurance policies do not cover the cost of dialysis owing to the high cost [1]. The only alternative to dialysis for ESRD patients is a successful kidney transplant. However, demand for donor kidneys has traditionally far exceeded supply [2]. Life on dialysis is a perpetual challenge due to demanding treatment schedule and dietary restrictions. The dialysis depends on machine for survival conflicts with the independence needed to maintain a normal life

Quality of Life (QoL) has been defined by the World Health Organization as the individuals' perceptions of their position in life, in the context of the cultural and value systems in which they live, and in relation to their goals, expectations, standards, and concerns.

It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, and their relationships to salient features of their environment [3].

In the mid-to-late 1970s, a predominant concern relating to QoL emphasized how health or its absence impacted upon the daily functioning of populations. This trend has become a critically important concept for health care and is categorized as a subset of QoL, which is broadly entitled health-related quality of [4]. Bird, Conrad and Fremont had defined Health-related QoL as the degree to which valued aspects of a person's life have been influenced, positively or negatively, by health and/or health-related interventions such as medical care [5] .

Health-related QoL has emerged as a conceptualization of health that can be measured and used as a quality indicator [6].

The assessment of health-related QoL among patients with chronic illnesses is one area of current scientific interest [7].

Healthrelated QoL studies can provide comprehensive and sensitive methods for communicating information on the burden of the disease and effectiveness of treatment if they are designed and implemented well [8].

There is growing recognition of health-related QoL issues in ESRD patients undergoing hemodialysis.

Despite a tremendous increase in knowledge and skills in the management of ESRD patients, such individuals particularly those treated by hemodialysis, remain ill. Impaired health-related QoL, dependence on others, and poor rehabilitation all contribute to physical and emotional disabilities that may persist even in well-dialyzed ESRD patients [9][10];

Nurses should understand the health-related QoL of patients undergoing dialysis. The rich information collected can help nurses to determine which patients may be at risk for diminished health-related QoL.

It has direct consequences for clinical decision-making, rehabilitation and management of individual patients [11].

Draper (1992) stated that nurses, in their decisions and actions, can influence their patient's QoL [12].

Additionally, they will be interested in promoting these conditions, which enhance life's quality, and eliminating those that impair it. Nurses can direct resources to areas where improvement may be required.

Patients can then have a greater chance of leading a fulfilling life. All these factors can positively influence the health-related QoL of patients, and directly benefit the family as well [11].

This could be accomplished through health education and promotion of awareness about the disease, treatment options, complications and self-care activities.

Counseling, on the other hand, is an important intervention that nurses - with appropriate training - can provide.

Referral of patients to the appropriate person according to their needs could be provided by an ordinary nurse who cares for the patient.

Finally, nurses can develop and implement rehabilitation programs for ESRD patients undergoing hemodialysis to assist them lead a productive life.

Within this context, assessment of health-related QoL of hemodialysis patients would help the nurse in delivering effective health-related interventions to improve the individuals' health-related QoL.

Significance of the study

Considerable progress has been made in the treatment and nursing intervention of chronic kidney disease, however, health-related QoL continues to be a significant problem for patients receiving hemodialysis [13].

Hence, hemodialysis patients are subjected to multiple physiological and psychological stressors and may be threatened with many potential losses and life style changes as they experience problems with disease-specific symptoms.

The combination of a decrease in energy, the unavoidable emergence of socioeconomic problems, and emotional reactions compounds the stress facing the patient [11]. The initiation of long-term dialysis treatment increases survival, but healthrelated QoL remains impaired. Therefore, researchers and clinicians generally agree that health-related QoL, its determinants and treatment options that may preserve subjective well-being merit continued investigation [14].

Findings of the present study would provide important information about the impact of hemodialysis on health-related QoL of the study sample and identify concerns and unmet needs of hemodialysis patients, this would assist the nurse in establishing methods that would help patients to lead 12 more productive lives and designing and implementing nursing interventions according to patients' needs and concerns.

Problem statement

"Assessment of quality of life and identification of

problems of patients undergoing haemodialysis through AV fistula in selected hospitals of Navi Mumbai."

Objectives:-

1) To assess the quality of life of patients after haemodialysis through AV fistula
2) To identify the problems of patients after haemodialysis through AV fistula.
3) To compare the quality of life with selected demographic variables.

Inclusion criteria: -

1) Patients who are diagnosed with chronic renal failure.
2) Patients who has undergone arteriovenous fistula surgery.
3) Patients who are willing to participate in the study.

Exclusion criteria: -

1) Patients are requiring more than one attempt for fistula puncturing.
2) Patients with temporary access.
3) Patients who are not willing for SF-36 Questionnaire.

2. Methodology

Research design

Research design used in this study is Qualitative Phenomenological Research Design.

Setting of the study

The research was carried out in the following hospitals-

SR	Name of the hospital
1	NMMC Hospital, Vashi
2	APEX Hospital, Sanpada

Sample

The sample selected for this study includes patients with end stage renal disease patients who are undergoing haemodialysis through arteriovenous fistula.

Sample size

The sample size for this study is 100 patients from haemodialysis unit of selected hospitals of Navi Mumbai.

Sampling technique

A non probability convenient sampling technique was used for selecting 100 haemodialysis patients who met the designated set of criteria during the period of data collection.

Data collection technique and tool

The investigator approached the concerned authority of the NMMC hospital in Vashi and APEX hospital in Sanpada and discussed the objectives of the study and formal permission was taken from the hospital authority. The samples were selected on the basis of the designated set of criteria and obtaining written consent from the patients.
The present study was aimed to focus on the quality of life and problems faced by the patients undergoing haemodialysis through arteriovenous fistula in selected hospitals of Navi Mumbai.
For data collection SF 36 Questionnaire was prepared which focus on physical, mental, social and general health aspects of the haemodialysis patients and questions based on demographic data was also prepared.

Section I: -Demographic data
Section II: - SF 36 Questionnaire was regarding general health, physical health, mental health and social health of the patients.
The time taken for one session of patient was 10-15 mins and the duration was one month for the completion of data collection.

Validity

The validity score of SF 36 Questionnaire is SF-36 was 0.797 as compared to SF 12 which has a score of 0.750.

Reliability

Reliability refers to the accuracy or inaccuracy rate in measurement device. The reliability score of the SF 36 ranges from 0.88-0.95.

3. Result:

The collected data is tabulated, analyzed, organized, and presented under the following headings.

Section 1: It deals with the analysis of the demographic data of the samples.

Section 2: It deals with the analysis of clinical data.

Section 3: Its deals with analysis of association of the demographic data such as age, gender, education, income, occupation, activity, habits with the physical and mental health.

Section 4: It deals with association of the clinical data with physical and mental health.

Section 1
It deals with the analysis of demographic data of the samples.

Table no 1 (A): Age wise distribution of clients:

SN	Age	Frequency
1	20 - 30 Yrs	5
2	31 - 40 yrs	5
3	41 - 50 yrs	24
4	51 - 60 yrs	38
5	60 & above	28

Table no 1 (B): Gender wise distribution of the clients

SN	Gender	Frequency
1	Male	59
2	Female	41

Table no 1 (C): Education wise distribution of clients

Sr. no	Education	Frequency
1	Illiterate	9
2	Primary	26
3	Higher Secondary	39
4	00Degree & above	26

Table no 1 (D): Occupation wise distribution of clients

Sr. no	Occupation	Frequency
1	Unemployed	36
2	Govt. employee	9
3	Private employee	26
4	Retired	29

Table no 1 (E): Income wise distribution of the clients

SN	Income	Frequency
1	Less than Rs10000	16
2	Rs 10001 – Rs 20000	48
3	Rs 20001 –Rs 30000	29
4	More than Rs 30000	7

Table no 1 (F): It deals activity wise distribution of the client

SN	Activity	Frequency
1	Heavy	7
2	Moderate	54
3	Sedentary	39

Table no 1 (G): Habits wise distribution of the clients.

Sr. no	Habits	Yes	No
1	Smoking	31	69
2	Tobacco	25	75
3	Alcohol	20	80

Section 2
It deals with the clinical data of the samples

Table no 2 (A): Co morbidities wise distribution of the client

SN	Co morbidities	Yes	No
1	Hypertension	68	32
2	Diabetes	47	53
3	Tuberculosis	3	97

Table no 2 (B): Dialysis per week wise distribution in the client

SN	Dialysis per week	Frequency
1	Twice a week	39
2	Thrice a week	61

Table no 2 (C): Duration wise distribution of the client

SN	Duration	Frequency
1	2 Hours	1
2	3 Hours	2
3	4 Hours	97

Table no 2 (D): Surgery wise distribution of the client

Surgery	Yes	No
	10	90

Major findings:

1) The majority of the samples were in the group of 51-60 yrs (38%). Most samples were male (59%).in accordance to professional qualifications majority were educated till higher secondary (39%).and unemployed(36%).the majority of sample had income between 10,000-20000 (48%).
2) The majority of the population performs physical activity (54%). In co morbidities majority of population was hypertensive (68%).followed by diabetes (47%). In majority of the population the duration of hemodialysis was thrice a week (39%).
3) Statistical analysis shows that there is significant association between the genders with mental health of the client as the p value is less than 0.05.
4) Statistical analysis shows that there is significant association between the education and income with mental health of the client as the p value is less than 0.05.
5) Statistical analysis shows that there is significant association between the physical activities with physical health of the client as the p value is less than 0.05.
6) Statistical analysis shows that there is significant association between the co morbidities –hypertension

with physical health and mental health of the client as the p value is less than 0.05.

7) Statistical analysis shows that there is significant association between the diabetes with physical health of the client as the p value is less than 0.05.
8) Statistical analysis shows that there is significant association between numbers of times of hemodialysis with physical health of the client as the p value is less than 0.05.

4. Discussion

According to the International Classification of Nursing Diagnoses (NANDA), the "deficient of knowledge" can be defined as the absence or deficiency of cognitive information related to a specific topic; thus, the patient and his family are unable to make adequate and conscious decisions about the treatment [15].

The attitude is defined as the tendency to respond positively or negatively to a given situation, that is to say, how the subject proceeds or the point of view he has on the subject [16].

The practice of self-care aims at carrying out certain actions, which, through a recommendations model, should contribute to maintaining the integrity and to preserve the vascular access. This practice is a human ability that allows the individual to care for himself [17]. To encourage the patient autonomy, the education is an essential tool; its success depends, besides the effectiveness of messages communication, on the base of scientific information and on the utilization of family channels to target the desired audience. The transmission of effective information increases the knowledge and awareness of individuals, helping them to: search for solutions, change behaviors, and develop capabilities [18].

On the other hand, education centered on the vertical model, in which knowledge is imposed and often, stimulates the dependence of patients on health professionals. In that model, the professional is considered the only holder of knowledge and it is not taken into account the client's knowledge. It is necessary to share the construction of knowledge aiming to make, the customer, responsible for his own care [19].

In patients undergoing renal substitutive therapy, the educational practices have great significance. Usually, the act of teaching occurs at random and fragmented, making difficult the learning; probably, this fact inhibits the clarification of doubts. Normally, in dialysis centers is still used the traditional model of health education, in which there is a greater concern about the current situation of disease, which hinders an more active involvement of users in their own care [20].

The transmission of information must be accompanied by effective communication, which is facilitated by the presence of a bond of trust between the patient and professionals. In this way, the care of hemodialysis restricted to technical and scientific knowledge may hinder the health education, since the establishment of interpersonal relationships helps to identify the customer needs in the care of fistula [21].

The lack of knowledge was also observed related to the care of AVF while it was used as venous access. Generally, the treatment of hematoma was inadequate, probably due to a deficient transmission of information to the user, mainly in the case self-care at home. In hemodialysis, when the hematoma appears it must be taken the following steps: Interruptions of the session, withdrawal of the needle, applying compressions on the site, immediately application of cold compresses, and in the following 12 hours verify the possibility of inserting the needle again. Likewise, it is very relevant informing patients about the importance of applying a compress on the day that appears the complication; first a cold compress and then a warm compress [22]. A similar study was done to Assess Quality of Life (QOL) in Haemodialysis Patients the result was Out of 50 patients, 31(62%) were men, 44(88%) were literate, 37(74%) were unemployed, 31(62%) were older than 44 years and 29(58%) were on hemodialysis $\geq$ 12 months. QOL of patients between subgroups of age (Z= -0.87), gender (Z= -0.313), primary cause of ESRD and socioeconomic classes showed no difference. Employed patients had better QOL in physical domain than unemployed one. Duration of dialysis & QOL had weak negative correlation (Correlation Coefficient= -0.0124) but individual domain score showed constant pattern. Interpretation and Conclusion: QOL of hemodialysis patients was independent of patient's age, sex, primary cause of ESRD, duration of dialysis, socioeconomic status. Employed patients had better QOL in physical domain than unemployed one. Duration of dialysis had reverse correlation with QOL

Conclusion

The result conducted on Assessment of quality of life and identification of problems of patients undergo haemodialysis through AV fistula in selected hospitals of Navi Mumbai. Revealed that quality of life of haemodialysis patients were significantly impaired. In this study the various parameters like age, gender, education, income .activity, health habit, duration of haemodialyisis and number of times of haemodialysis were analyzed .the result shows that physical domains of hemodialysis patients indicate that they are more dependent on haemodialysis for survival and daily activities were disturbed. Many of them were dissatisfied as they have negative feeling as anxiety and depression thus there is low score in psychological domain.

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