Original Research Paper

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A Study on Burden of Heamodialysis and Problems of Dialysis Patients in Teritiary Care Hospital, NIMS

Medical Science

KEYWORDS : Hemodialysis, patient satisfaction, patient care

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ABSTRACT

***OBJECTIVES** : To get an in-depth knowledge about dialysis unit in a tertiary hospital. To determine the problems of dialysis patients and provide recommendations. To reduce the problems in the new set up of hospital with the help of research results.*

***METHODS**: A sample consist of a subset of the subject that comprise the population. The sample selected randomly for the study was 20 hemodialysis patients of ESRD,in NIMS Hospital , Panjagutta, Hyderabad, who met the inclusion criteria. Purposive sampling technique is used and based on the structured questionnaire a pilot study was done.*

***RESULTS**: The no of patients suffering from non medical problems is 76% irrespective of age , sex, income, occupation, literacy, joint family etc.The no of patients suffering from medical problems is 24% irrespective of age, sex, occupation, socio –economic status etc.*

***CONCLUSIONS:** Medical problems can be treated or managed immediately or rather in a relative short duration of time. On the other hand non- medical or administrative problems need to be dealt after factoring in many aspects. To promote acceptance and uptake of institutional and home haemodialysis among patients, effective strategies are needed that provide information to patients , assure access to caregiver respite, provide continuous availability of medical and technical advice and facilitate peer patient support. Obviously this would consume more time to solve the problem. Radical or paradigm changes need to formulated and incorporated in to the existing administrative policies so as to obviate any such hurdles.*

1.Introduction:

With the transition of demographic profile from younger to older population there is a gradual concurrent epidemiological transition taking place World wide. Old age with unhealthy diets, tobacco usage, obesity and sedentary life styles in contributing to the increase in chronic diseases like cancers, cardiovascular diseases, diabetes, hypertension, neuro – psychiatric diseases and chronic kidney diseases. It is evident that all countries in the world, irrespective of their economic development are facing an increasing trend in non communicable diseases, which are expected to account for73% of deaths and 60% of disease burden by the year 2020.

The prevalence of CKD is rising Worldwide. The global patient population with ESRD continues to grow at the rate of 7% per annum due to demographic transition, increase in diseases leading to CKD and increased availability of diagnostic and therapeutic facilities. Community based prevalence figures are not available in India for CKD. However, it is estimated that approximately 1lakh patients develop ESRD in India annually.

CRF is a devastating medical , social and economic problem for patients and their families. The availability and quality of dialysis programs largely depend on the prevailing economic conditions, the political structure, overall health care facilities, and the healthcare funding strategies of various countries. Large disparities separate the socio economic structures of various countries, especially the developed and the developing countries . In the developed world, health care is generally available, where as the vast population of people living in developing countries do not have access to even basic amenities like sanitation and safe drinking water. For ESRD patients in economically advanced countries, the focus now is on improving quality of life and increase long time survival .In marked contrast , the developing countries are grappling with short term patient survival and enormous cost of therapy that limit continuation of treatment in the majority of patient with ESRD. Most of the developing world has a two-tier healthcare delivery system. In government run nonprofit hospital hospitals patients do not have to pay for medical advice, basic examination , or treatment , but they must pay for disposables(gowns , gloves, syringes, etc) and drugs. However large number of private hospitals, patients do have to pay for all services.

The exact number of patients with chronic renal failure requiring RRT in the developing world is not known. Unlike the developed world, most developing countries lack renal registries. Most available data, including those from the most populous countries like China and India ,reflect the collected experience from a few individual physicians and few tertiary centers and do not reflect the situation in its entirely.

2. OBJECTIVES OF THE STUDY:

1. To get an in-depth knowledge about dialysis unit in a tertiary hospital.
2. To determine the problems of dialysis patients and provide recommendations.
3. To reduce the problems in the new set up of hospital with the help of research results.

3. METHODOLOGY

3.a SETTING

In view of accomplishing the objectives that is in assessing the problems faced by dialysis patients, an assessment approach was considered the best.

The study was considered in 1000 bedded, NIMS Hospital, Panjagutta, Hyderabad. This esteemed institute is well equipped with ultramodern treatment facilities in various specialities like cardiology, neurology, nephrology, surgery, urology etc. The total number of employees working in the hospital is 1500. This setting was chosen for convenience in terms of adequate sample and co-operation offered by dialysis patients in the hospital. A population is the entire aggregation of cases that meet a designated set of criteria. In the present study the population consists of patients un-

dergoing hemodialysis in NIMS Hospital, Panjagutta, Hyderabad.

3.B STUDY DESIGN AND SAMPLE

SAMPLE SIZE

A sample consist of a subset of the subject that comprise the population. The sample selected randomly for the study was 20 hemodialysis patients of ESRD,in NIMS Hospital , Panjagutta, Hyderabad, who met the inclusion criteria.

SAMPLING CRITERIA

Samples were selected with the following predetermined set of criteria.

INCLUSION CRITERIA FOR SAMPLING

1. Haemodialysis patients who are interested to participate in the interview and research.
2. Haemodialysis patients who are able to read and write English.
3. Haemodialysis patients who are available for the data collection.

EXCLUSION CRITERIA FOR SAMPLING

1. Haemodialysis patients who are disinterested to participate in the research.
2. Haemodialysis patients who are unavailable at the time of data collection and Health education.
3. Haemodialysis patients who are not conversant to read and write in English.

SAMPLING TECHNIQUE

Purposive sampling technique

4.ANALYSIS AND INTERPRETATIONS

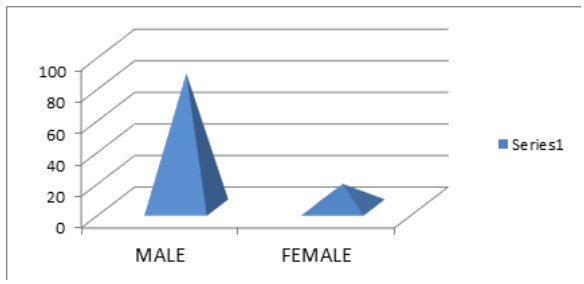
The dialysis unit is located at Nizams Institute of Medical Sciences, Panjagutta, Hyderabad Telangana. The total number of patients undergoing hemodialysis is around 250 with separate zones for HCV positive, HCV negative and Arogyasree scheme beneficiaries. The hemodialysis shifts of patient run almost 24 hrs per day, with the staff (doctors, nurses , technicians, menial staff) being present round the clock. The routine dialysis shifts are as follows 1st shift -8am to 12pm, 2nd shift- 12pm to 4pm, 3rd shift- 4pm to8pm, 4th shift 8pm to 12am , 5th shift -12am to 4am.

A study sample of randomly selected 20 HD patients, constituted the respondents.

TABLE 1 : The socio- demographic characteristics of HD patients

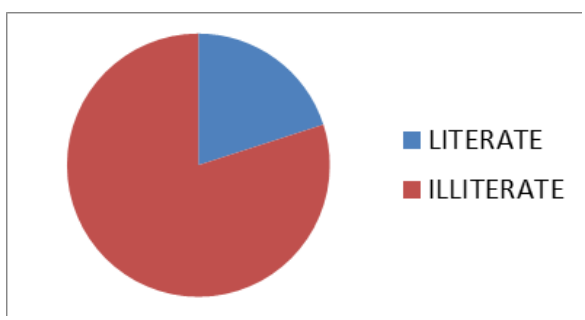
S.NO	DEMOGRAPHIC VARIABLES	FIGURES	PERCENTAGE
1	Age range of respondents(years) A . 20-30 B. 30-40 C. 40-50 D. 50-60	 4 6 2 8	 20 30 10 40
2	SEX Male Female	17 3	 85 15
3	Education Literate Illiterate	4 16	20 80
4	Marital status A. Married B. Unmarried	13 7	65 35
5	Type of family A. Joint family B. Nuclear family	8 12	40 60
6	Monthly Income A. <1000 B. 1000-2000 C. >2000 D. Non earning	1 8 5 6	5 40 25 30

MALE TO FEMALE RATIO:

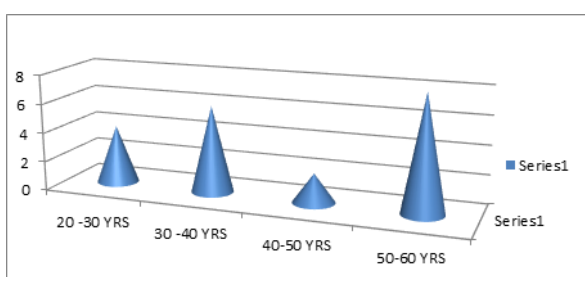


Regarding the Male 17(85%) to Female 03 (15%) ratio of patients on hemodialysis.

LITERACY RATIO:



The ratio of patients who were literate 04 (20%) and illiterate 16 (80%) ,with SSC pass being the criteria for being literate.



The range of patients age 20-30 yrs 04(20%), 30-40 yrs 06(30%), 40-50 yrs 02 (10%) and 50-60 years 08(40%) undergoing maintenance haemodialysis.

DISTRIBUTION OF MEDICAL VS NON MEDICAL PROBLEMS AMONG HAEMODIALYSIS PATIENTS AS PER THE RATING SCALE

RESPONDENTS	MEDICAL PROBLEMS		NON MEDICAL PROBLEMS	
	F	%	F	%
PATIENTS	6	24	14	76

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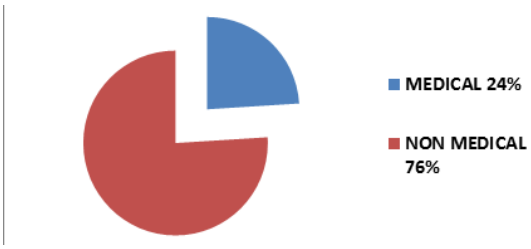
MEDICAL V/S NON MEDICAL PROBLEMS



5.DISCUSSION

In India, with a population base of one billion and an estimated incidence of ESRD of 100 pmp, approximately 100,000 patients develop ESRD each year. Of these 90% never see a Nephrologist. Of the 10,000 patients who do consult a Nephrologist, renal replacement therapy is initiated in 90%;the other 10% are unable to afford any from of RRT. India has no governmental reimbursement for dialysis or transplantation, and only a small percentage of patients with ESRD have employer sponsors or health insurance that pays for RRT. Of the patients referred to Nephrologist , approximately 30% to 40% are critically ill and require immediate dialysis because of symptoms that include pulmonary oedema, pericardial effusion, severe metabolic acidosis, and encephalopathy.

The majority of the 9000 patients who receive RRT are begun on HD. Only a small proportion(<0.5%),usually those who are older, more affluent, and unsuitable for transplantation, start CAPD. Of the 8500 patients who begin HD, about 60% are lost to follow up within three months. Presumably these patient drop out of therapy because they realize the HD is not a cure and has to be performed over the long term, and that the high cost of HD will impoverish them. Approximately 9% to 13% of patients die within one year while being treated. Between 17% and 23%of patients undergo renal transplantation after being on dialysis for 2 to 3 months for pre-transplant stabilization.

Although about 4% of patients remain on MHD, very few stay on MHD longer than 24 months. Only 4% of patients can pay for RRT from the pooled family resources, 63%take help from their employers or accept charity, 30% sell property and jewellery ,and 20% take loans. The mean age of ESRD Patients requiring dialysis in most developing countries is much lower 32 to 42 years ,than that in developed world 60 to 63 years.

Among the reasons for this difference are the delay in detecting renal disease and the failure to institute controlling and preventive measures in patients with progressive renal failure, both of which result in faster deterioration of renal function and progression to ESRD. About 61% patients with chronic renal function failure present with ESRD to specialists. Late referrals lead to a faster progression of conditions ,increase the cost of therapy, and worsen overall patient survival.

The key issues in Dialysis centers are,

High cost of capital equipments. Limited availability of trained clinical and para clinical manpower – Nephrologists are in short across the country and there is a huge shortage for dialysis technicians, most hospitals/centres train nurses and BSc Biology/Zoology graduates as dialysis technicians. Short life of dialysis equipment – seven years in the normal operation life of a dialysis machine. Requires rigorous infrastructure set up.Regular maintenance of equipments as the running time of machines is high 6. High cost of associated employee salary. Power supply, procurement of supplies adds to cost.

utilisation of dialysis depends on Availability of nephrologist,Uptime of the dialysis machine,Routine availability of consumables, Availability of trained manpower,Availability of advanced diagnostic support to assess and advice dialysis

Roles and Responsibilities of the Government

Provide emergency medical advice and treatment for complications arising during dialysis. Ensuring access to water and electricity. Providing laboratory, diagnostic and ambulatory support whenever required . Providing a conducive organizational atmosphere for the set up to operate. Ensuring minimum number of dialysis cases per month

Roles and Responsibility of the Service Provider

Manning and operating the dialysis centre as per the terms of reference. Providing the necessary medical advice and treatment through a nephrologist. Constructing/renovating the building to house the dialysis centre within the agreed duration as per the TOR. Maintaining the supply chain of consumables.Recruiting, training and retaining of man power for the centre. Adhering to the applicable laws and regulations considering a Dialysis centre. Reporting as per the expected norms of the terms of reference. Co-ordinating with the medical hospital for delivering the services. To maintain the dialysis equipment in operable condition 95% of the time

6. CONCLUSION:

To promote acceptance and uptake of institutional and home haemodialysis among patients, effective strategies are needed that provide information to patients , assure access to caregiver respite, provide continuous availability of medical and technical advice and facilitate peer patient support.

1. The no of patients suffering from non medical problems is 76% irrespective of age , sex, income, occupation, literacy, joint family etc.
2. The no of patients suffering from medical problems is 24% irrespective of age, sex, occupation, socio –economic status etc.

Medical problems can be treated or managed immediately or rather in a relative short duration of time. On the other hand non- medical or administrative problems need to be dealt after factoring in many aspects. Obviously this would consume more time to solve the problem. Radical or paradigm changes need to formulated and incorporated in to the existing administrative policies so as to obviate any such hurdles.

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