

Chronic Kidney Disease: (old age peoples) from Safai hospital district Etawah U.P

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ABSTRACT

Chronic diseases have become a major cause of global morbidity and mortality even in developing countries. The burden of chronic kidney disease (CKD) in India cannot be assessed accurately. The approximate prevalence of CKD is 800 per million populations, and the incidence of end-stage renal disease (ESRD) is 150–200 pumps. The most common cause of CKD in population-based studies is diabetic nephropathy. India currently has 820+ nephrologists, 710+ hemodialysis units with 2,500+ dialysis stations and 4,800+ patients on CAPD. There are 172+ transplant centers, two-thirds of which are in South India and mostly privately run. Nearly 3,500 transplants are done annually, the total number of cadaver donors being approximately 700 till now. Thus, taken together, nearly 18,000–20,000 patients (10% of new ESRD cases) in India get renal replacement therapy. The cost of single hemodialysis varies until recently; the government did not recognize CKD/ESRD as a significant problem in India. However, some illustrious activities in relation to CKD brought attention of the media and policymakers to this very common but till now deprived group of diseases. On the one side the government has initiated a process by which it is planning to establish stand-alone hemodialysis units in the country to increase the facilities at an affordable cost, and on the transplant side it had launched a National Organ Transplant Program to facilitate transplantation on a national scale.

Keywords: CKD (Chronic kidney disease), Nephropathy, Therapy, ESRD (End stage renal disease).

Introduction

Earlier considered to be a health problem only in developed countries, 4 out of 5 chronic disease deaths now occur in low- and middle-income countries. In India the projected number of deaths due to chronic diseases will rise from 3.78 million in 1990 (40.4% of all deaths) to an expected 7.63 million in 2020 (66.7% of all deaths). The CKD burden is increasing rapidly worldwide. The commonest cause of CKD in this population-based study was diabetic nephropathy responsible for 41% cases. The prevalence of any type of renal disease (not CKD) was seen in 0.68% and CKD was seen in 0.16% in the initial survey. Chronic kidney disease (CKD) is a lifelong condition. The kidneys gradually stop working as well as they should. This usually happens over many years. Optimal management of patients with chronic kidney disease (CKD) requires appropriate interpretation and use of the markers and stages of CKD, early disease recognition, and collaboration between primary care physicians and nephrologists. Because multiple terms have been applied to chronic kidney disease (CKD), eg, chronic renal insufficiency, chronic renal disease, There are five stages of CKD the final stage is kidney failure, when the kidneys can no longer support the body. However, some people with CKD do not go through all stages. CKD is quite common in older adults with other illnesses, but very rare in children. It is caused by different conditions that affect the kidneys. Some of these are present at birth, and others start later in childhood. A team of healthcare professionals who specialize in treating and caring for babies, children and young people with kidney conditions will support you and your family. They will make sure your child gets the right tests and treatments at each stage of the disease. Modifiable risk factors for CKD progression are HTN, diabetes, morbid obesity, metabolic syndrome, hypercholesterolemia, and heavy consumption of non-narcotic analgesic preparations, anemia, and cigarette smoking. Perhaps the best prognosticator for CKD progression is the rate of decline of GFR. Rates of decline >4 mL/min/1.73 m² per year are associated with greater progression risk. In diabetics, annual GFR rates of decline 10–12 mL/min/1.73 m² may occur. In heart failure, GFR declines 15 mL/min/1.73 m² per year are associated with worse anemia and progression to CKD Stage 5. African American ethnicity is a major risk factor for progressive CKD from type 2 diabetic kidney disease, HTN (nephrosclerosis), and HIV. In general, Native Americans, Hispanics, and Asians have increased risk for type 2 diabetic CKD. Cigarette smoking aggravates CKD. Risk factors that promote the accelerated atherosclerosis of CKD include elevated angiotensin II levels, proteinuria, secondary hyperparathyroidism, dysregulated calcium and phosphate metabolism, ECF volume expansion, and the intrinsic chronic inflammatory state of CKD. Strategies that retard the progression of CKD includes optimizing antihypertensive therapy; stringent glycemic control; cigarette smoking cessation; avoidance of cocaine, NSAIDs, and exposure to nephrotoxic agents; and dietary protein and phosphorus restrictions.

Methods

Research methodology is a way to systematically solve the research problem. It may be understood as a science of study which describes how research is done scientifically. The following details of the methods and procedures will be followed during the present investigation:

A cross-sectional and descriptive design was used in this study. This research work was carried out in Safai hospital district Etawah Uttar Pradesh. The 60 young people between 30 to 60 years were selected as a population of the study. The selection of the respondents was based on the random sampling from the population of the study. Total number of 60 respondents (young peoples) from Safai hospital district Etawah was selected for study purpose. Pretested schedule was used in order to collect data from the respondents. For this purpose the respondents were personally interviewed with the help of prepared both close-ended and open-ended questionnaire. Secondary data will be obtained from published reports, research studies, bulleting, government publication etc. Data regarding general profile of respondent was collected using the first part of the schedule. This section covered the aspects including respondents name, age, and sex, religion, status, type of family, income, education status and all these are important for knowing the respondent socio-economic status. Socio-demographic factors refer to set of variable such as population's age, socio-economic status (education, occupation and income), material status, culture, eating pattern, lifestyle- (urban/rural). All factors will be assessed by schedule except socio-economic status. Socio-economic status will be assessing by (Kuppuswami, 2014). Diet survey constitute an essential part of any complete study of nutritive status of individual or group, providing essential information on nutrient intake levels, sources of nutrients, food habits and attitudes. (Swaminathan, 2011).

24 hours dietary recall method is widely used in dietary surveillance. The interviewer asks the respondents questions to obtain information on the types and the amount actually consumed by an individual one or more specific days (Marie, 2007). The schedule also covered the information regarding foods restricted, avoided anti specially included for the present condition to the management of disorder, frequency of consumption of different food groups followed and alike.

Anthropometric measurements:

Nutritional anthropometry has been defined as “measurements of the variations of the physical dimensions and the gross composition of the human body at different age levels and degrees of nutrition (Michelle McGuire and Kathy Beerman-2006). Hence, anthropometric measurement is useful criteria for assessing the nutritional status.

Height: Height will be measured by Infantometer. In children below the age of two year who cannot stand properly, recumbent length (crown-heel-length) should be measured with

infantometer. The legs need to be held straight and firm with the feet touching the sliding board. (Srilakshmi, 2012).

Body Weight: Beam balance will be used to measure the weight of all subjects. The infants weight will be recorded in his/her casual clothing without shoes, not leaning against or holding anything. Woollens were also removed. The measurements were made to nearest 0.5 kg. The zero error of the weighing scale should be checked before taking the weight and corrected as and when required. (Srilakshmi, 2012).

Clinical Assessment: Respondent was examined for clinical sign and symptoms of chronic kidney disease.

Statistical Analysis:

The collection of data was summarized, tabulated, processed and analyzed with the help of appropriate statistical technique.

Results & Discussion

This chapter presents the results of the study undertaken and the relevant interpretation and discussion in the objectives of the study.

Table – 1.1

Respondents according to their age- group

Age group (years)	Male	Female	N=60
30-40	6 (20)	10 (33.33)	16 (53.33)
41-50	12 (40)	18 (60)	33 (100)
51-60	12 (40)	2 (6.60)	14 (46.66)

This table: shown that 53.33 percent respondents were in the age group 30-40 years, whereas 100 percent respondents were in the age group 41-50 years, and 46.66 percent respondents were in the age group 51-60 years.

Table – 1.2

Respondents according to their education

Education	Males	Females	N=60
Illiterate	8 (13)	12 (20)	20 (33.33)
High school	2 (3.3)	10 (16.66)	12 (20)
Intermediate	2 (3.3)	5 (8.3)	7 (11.66)
Graduate	2 (3.3)	3 (5)	5 (8.33)
Postgraduate	16 (26.6)	0 (0)	16 (26.66)

This table: shown that still the majority of respondents are not able to get high level of education. Hence, 33.33 percent respondents were illiterate, where as 20 percent respondents were high school passed out, 11.66 percent respondents were intermediate passed out, where as 8.33 percent respondents were till graduate level and 26.66 percent respondents were till post graduate level.

Table -1.3

Respondents according to their occupation

Occupation	Males	Females	N=60
Services	12 (20)	12 (20)	24 (40)
Housewife	0	11 (18.33)	11 (18.33)
Business	14 (23.33)	3 (5)	17 (28.33)
Others	4 (6.66)	4 (6.66)	8 (13.33)

This table: this table shown that 20 percent male respondents were occupation in services, where as 23.33 percent male respondents were occupation in business and 6.66 percent male respondents were occupation in others.

Regarding female respondents 20 percent female respondents were occupation in services, whereas 18.33 percent female respondents were house wives, 5 percent female respondents were occupation in business and 6.66 percent female respondents were occupation in others.

Table – 1.4

Respondents according to family history

Family record	Males	females	N=60
Family history present	18 (30)	11 (18.33)	29 (48.33)
Family history absent	12 (20)	19 (31.66)	31 (51.66)

This table: table shown that 48.33 percent respondents have family history of kidney stone, and 51.66 percent respondents did not have any family history of kidney stone.

Table 1.5

Adult's patients of Anthropometric measurements

Anthropometric measurements	Males	Females	N=60
Height (cm)			
140-150	4 (6.66)	18 (13.33)	22 (20)
150-160	12 (20)	11 (18.33)	23 (38.33)
160-170	4 (6.66)	5 (8.33)	9 (15)
170-180	10 (16.66)	6 (10)	16 (26.66)
Weight (kg)			
40-60	18 (30)	15 (25)	33 (55)
60-80	10 (16.66)	10 (16.66)	20 (33.33)
80-100	2 (3.33)	5 (8.33)	7 (11.66)
BMI			
< 18.5	13 (21.66)	14 (23.33)	27 (45)
18.6-24.9	12 (20)	10 (16.66)	22 (36.66)
25-29.9	3 (5)	6 (10)	9 (15)
>30	2(3.33)	2 (3.33)	2 (3.33)

These tables shown that height (cm) in male patient 140-150 cm were 6.66 percent, 150-160 cm were 2 percent, 160-170 cm were 6.66 percent and 170-180 cm were patient 16.66 percent, and this table shown that in female patient 140-150 cm were 13.33 percent, 150-160 cm were 18.33 percent, and 160-170 cm were 8.33 percent, and 170-180 cm were 10 percent female patient. Regarding to weight in male patient 40-60 kg were 30 percent, 60-80 kg were 16.66 and 80-100 kg were 3.33, and this table shown that in female patient 40-60 kg were 25 percent, 60-80 kg were 16.66 percent and 80-100 kg were 8.33 percent. Regarding BMI for male respondents 21.66 percent respondents were <18.5, whereas 20 percent respondents were 18.6-24.9, 5 percent respondents were 25-29.9, and 3.33 percent were >30. Regarding BMI for female respondents 23.33 percent respondents were <18.5, 20 percent respondents were 18.6-24.9, whereas 5 percent respondents were 25-29.9 and 3.33 percent respondents were >30.

Normal BMI = 18.6-24.9 (Srilakshmi 2002)

Biochemical test:

Table – 1.6

Respondents as per various bio chemical test values.

Biochemical level	Males		Normal values for males	Females		Normal values for females
	Normal	High		Normal	High	
Blood Urea (mg/dl)	12 (20)	10 (16.66)	15-40 mg/dl	11 (18.33)	16 (26.66)	10-13mg/dl
Serum creatinine(mg/dl)	13 (21.66)	12 (20)	0.16-1.2mg/dl	9 (15)	4 (6.66)	0.4-1.0mg/dl
Serum Uric acid(mg/dl)	5 (8.33)	8 (13.3)	2.5-7mg/dl	10 (16.60)	10 (16.66)	1.5-6mg/dl

This table shown that of various biochemical test conducted on respondents. Blood urea (mg/dl) levels of 16.66% male were higher than normal and 26.66% female and higher values for it. Serum cretinine level 20% male and 6.66 % female were higher than normal values. Serum uric acid level was raised in 13.33 % male and 16.66 % female respondents thus it can be concluded that biochemical parameters were higher than normal in significant number of respondents.

Table no 1.7

Respondents according to their food habits

Food items	Male	Female	N=60
Vegetarian	12 (20)	18 (30)	30 (50)
Non vegetarian	10 (16.66)	5 (8.33)	15 (25)
Eggatrian	8 (13.33)	7 (11.66)	15 (25)

This table: table shown that 50 percent respondents were vegetarian, whereas 25 percent respondents were non vegetarian, and 25 percent respondents were eggetarian.

Table 1.8

Respondents according to habit of consumption of food groups

Food groups	Daily	Occasionally	Never
Cereals	60 (100)	--	--
Pulses	46 (76.66)	14 (23.33)	--
Milk & milk products	24 (40)	26 (43.33)	10 (16.66)
Green leafy vegetables	45 (75)	12 (20)	3 (5)
Roots & tubers	35 (58.33)	25 (41.66)	
Other vegetables	60 (100)	--	--
Fruits		55 (91.66)	5 (8.33)
Meats & poultry	20 (33.33)	18 (30)	22 (36.66)
Fats and oils	60 (100)	--	
Sugar & jaggery	28 (46.66)	32 (53.33)	--

This table shown that 100 percent respondent were using cereals in their daily food daily where as 76.66 percent respondent were using pulses daily and 23.33 percent respondent were using occasionally, other 40 percent respondent were using milk and milk products daily, and 43.33 percent respondent were using occasionally and 16.66 percent respondent were using never, and other 75 percent respondent were using green leafy vegetables daily, and 20 percent respondent were using occasionally and 5 percent respondent were using never, and other 58.33 percent respondent were using roots & tubers daily, and 41.66 percent respondent were using occasionally, and other 100 percent Respondents were using other vegetables, and 33.33 percent respondent were using meat & poultry, and 30 percent respondents were using occasionally, and 36.66 percent respondents were using never, 60 percent respondents were using fats & oils, and other 46.66 percent respondents were using sugars & jiggery, and 53.33 percent respondent were using occasionally.

Conclusion

It can be concluded from above finding that CKD are more common in middle age group. Most of the patients belong to low educational background and were nor well aware about role of about in disease. Nutritional status of patients of CKD in general in inadequate. CKD patients are more common in over weight population under this study. Renal calculi are more commonly found in vegetarian population in present study. Biochemical values show that serum blood urea, serum cretinine and serum uric acid level were higher than normal values which is suggestive of renal kidney patients. The total energy consumption was significantly lower than RDA values in most of the patients of renal stones.

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