



RISK FACTOR AND CLINICAL PROFILE OF PATIENTS WITH CHRONIC KIDNEY DISEASE IN JHARKHAND-A CROSS SECTIONAL STUDY

Medicine

Dr Rashmi Sinha Associate Professor, Dept. of Medicine RIMS, Ranchi

Dr Priyanka Sahu Junior Resident, Dept. of Pediatrics, LTMMC & GH, Mumbai

Dr Shiny Kumari Khess Senior Resident, Dept. of Medicine RIMS, Ranchi

Dr. Nishant Sinha* Junior Resident, Dept. of Medicine RIMS, Ranchi *Corresponding Author

ABSTRACT

Introduction: This is cross-sectional hospital record based study done to identify possible clinical profile of patients with chronic kidney disease (CKD) at a tertiary care center in Jharkhand.

Materials and Methods: We performed a data-based cross-sectional study on patients having CKD admitted in 8 months from July 2019 to April 2020 in medicine ward, at RIMS Ranchi. Detailed information on demographic and medical history was collected using the in hospital records, and the data were statistically analyzed to find out the association between diabetes mellitus, hypertension, serum urea and creatinine, history of illicit drug abuse, and haemodialysis burden among them.

Results: The mean age of patients having CKD was 49.6 ± 14.59 years, with male-to-female ratio of 1.63. The history of consumption of nonsteroidal anti-inflammatory drugs/other local zaribooti etc was found in about 7%, out of which NSAIDs were 90% abused with 10% or them couldn't give details about the drug, or told zaribooti (local country side herbal remedies). Among them the average urea was 194.56 mg/dl with average more in women than men. The incidence of hypertension and diabetes was 74% and 58% respectively. 85% of them were haemodialysed at our centre. People living in the rural area with no or limited medical facilities were more prone to CKD (55%).

Conclusions: Although the present study is a crude estimate for CKD status, in lack of any previous authentic study, we are able to show the clinical and demographic profile of CKD patients attending Tertiary care center in Jharkhand.

KEYWORDS

Chronic kidney disease, Jharkhand, tertiary care center

INTRODUCTION

Chronic kidney disease is a worldwide public health problem, with adverse outcomes of kidney failure, cardiovascular disease (CVD), and premature death^[1] and need for Renal Replacement therapy. Chronic diseases have become a major cause of global morbidity and mortality both in developed and developing countries. The burden of chronic kidney disease (CKD) in India has not been assessed accurately^[2]. The approximate prevalence of CKD is 800 per million population, and the incidence of end-stage renal disease (ESRD) is 150–200 per million population^[2] worldwide. Global disease burden report of 2015 pointed that CKD is the 12th most common cause of death with a 37.1% rise in mortality over 10 years.^[3] Even in western world, the healthcare cost and financial burden due to CKD is huge and unsustainable.^[4] Due to rapid life style changes, increased life expectancy, and high prevalence of non-communicable diseases, chronic kidney disease is uniformly affecting low and middle income countries including India. As we have no renal registry or a standardized diagnostic method the actual burden is still unknown and it varied widely from 2.9% to 16.54% in different studies using different methods.^[5] Lack of both awareness and treatment facilities make diagnosis possible, only at late stages of 4 or 5. Our health care system is not well equipped for management of CKD and many patients die without appropriate diagnosis and treatment.^[6] CKD affects mostly males in their productive age groups. In western countries, diabetes and hypertension account for over 2/3rd of the cases of CKD.^[6] In India too, diabetes and hypertension today account for 40–60% cases of CKD.^[4]

Early diagnosis, better management, availability of RRT has improved the life of these patients. As per recent Indian Council of Medical Research data, prevalence of diabetes in Indian adult population has risen to 7.1%, (varying from 5.8% in Jharkhand to 13.5% in Chandigarh) and in urban population (over the age of 40 years) the prevalence is as high as 28%.^[4,5] Likewise the reported prevalence of hypertension in the adult population today is 17% (14.8% from rural and 21.4% from urban belt). A similar prevalence of 17.4% has been reported by Panesar et.al. (in the age group of 20–59 years) even from slum-resettlement colony of Delhi.^[6,7] With rising trend of these diseases in India, prevalence of CKD is also following the same rise, and obviously this is the key target population to address.

A study published in this issue is from a rural belt of Karnataka. The

population had a mean age of 39.88 ± 15.87 years with 3.82% prevalence of diabetes and 33.62% of hypertension. Authors found 6.3% prevalence of CKD stage 3; which is the highest reported till date by any Indian worker.^[6] It is disturbing to see the rising prevalence of hypertension and CKD in rural belts. Possibly with shifting population the difference between urban and rural areas is getting blurred. Undoubtedly, we need more Indian data to validate these findings.

Materials and Methods: We performed a data-based cross-sectional study on 100 patients having CKD admitted in 8 months from July 2019 to April 2020 in medicine ward, at RIMS Ranchi. Detailed information on demographic and medical history was collected using the in hospital records, and the data were statistically analyzed to find out the prevalence and trend of diabetes mellitus, hypertension, serum urea and creatinine, history of illicit drug abuse, and haemodialysis burden among them. Permission from Institutional Ethics Committee was taken.

Results and Observation

In our study, the average age of CKD presentation in Jharkhand was found to be 49.6 ± 14.59 . Among males the average age at presentation was 51.1 years and female 49.9 years, with females presenting 2.6 years earlier than men. The male to female ratio was 1.62. The People living in the rural area with no or limited medical facilities were more prone to CKD 55%. The history of consumption of nonsteroidal anti-inflammatory drugs/other local zaribooti etc was found in about 7%, out of which NSAIDs were 90% abused with 10% or them couldn't give details about the drug, or told zaribooti (local country side herbal remedies). Among them the average urea was 194.56 mg/dl with more in men (168.90mg/dl) than women (160.0mg/dl). The reverse was found in creatinine level, average was 11.23 mg/dl with women (8.98mg/dl) heading average creatinine more than men (8.00mg/dl). The incidence of hypertension and diabetes was 74% and 58% respectively. 85% of them were haemodialysed at our centre. About 14% of them couldn't be demonstrated to have any cause for CKD.

DISCUSSION

We don't have any authentic nationwide study on CKD to compare our present study.^[8] A study was published in a recent issue of the journal from a rural belt of Karnataka.^[9] The population had a mean age of 39.88 ± 15.87 years with 3.82% prevalence of diabetes and 33.62% of hypertension. Authors found 6.3% prevalence of CKD; which is the

highest reported till date by any Indian worker. The commonest cause of CKD is diabetic nephropathy and a good fraction develop it within 10 years after being diagnosed with diabetes.^[10] Kerala, well known for good health care seeking behavior, has a high prevalence of type 2 diabetes mellitus, hypertension, and its risk factors with an early onset making the population vulnerable for CKD.^{[11],[12]} Out of pocket expenditure is also high.^[13] In government setting the availability of nephrologists, facilities for haemodialysis and renal transplantation is limited. Major care provider in kidney disease management is private sector, a little higher than in general health care.^[14] Government has provided specific financial assistance schemes namely Karunya benevolent fund, Rashtriya Swasthya Bhima Yojana for CKD patients.

CONCLUSION:

India is a fast developing country with huge ethnic, religious and cultural variation. India has shown a paradigm shift from communicable diseases to noncommunicable diseases. Chronic kidney disease is a major public health problem worldwide and so in India. The increasing incidence and prevalence of Diabetes mellitus and hypertension are major cause of rising Chronic kidney disease or end stage renal disease. In Jharkhand there is a large tribal population and their seeking to tertiary health care is quite less. A disease like CKD that needs proper evaluation and inpatient or outpatient care, these population are deprived. The present study has shown the profile of CKD patient presenting at tertiary care centre.

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