Prevalence and Risk Factors of Chronic Kidney Disease (CKD) in Coorg Districts of Karnataka: Some Preliminary Observations

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Abstract:

Chronic kidney disease occurs when one suffers from gradual and usually permanent loss of kidney function over time. Kidney diseases and kidney failure are alarmingly increasing in India. It is one of the major causes of morbidity and mortality in India. If kidney disease gets worse, wastes can build to high levels in the blood. Complications like high blood pressure, anemia (low blood count), weak bones, poor nutritional health and nerve damage may occur. Chronic kidney disease may be caused by diabetes, high blood pressure and other disorders. Early detection and treatment can often keep chronic kidney disease from getting worse. This present study has been conducted in Coorg dist of Karnataka. A small sample considering 150 patients suffering from various types of CKD using purposive sampling technique were followed. Major findings have been given. This is the first population-based epidemiological study of CKD in the Tibetan population. The present study indicates the urgent need to develop comprehensive strategies targeted at reducing the CKD burden in this area and may lead to a better understanding of CKD in high-altitude populations.

Key word: CKD, epidemiology, Coorg.

Introduction

CKD is a worldwide health problem. Chronic kidney disease (CKD) is a serious condition associated with premature mortality, decreased quality of life, and increased healthcare expenditures. Chronic kidney disease occurs when one suffers from gradual and usually permanent loss of kidney function over time. This happens gradually, usually months to years. Chronic kidney disease can be divided into five stages of increasing severity and it is also referred to as end-stage renal disease, wherein there is total or near-total loss of kidney function and patients need dialysis or transplantation to stay alive. There are approximately 7.85 million people suffering from chronic kidney failure in India.
The burden of chronic kidney disease (CKD) in India cannot be assessed accurately according to the first annual report published by the CKD registry of India involving 13,151 patients, diabetes and hypertension were major causes of CKD in India accounting for 28.5% and 16.2% respectively, as in other parts of the world. Since 25–40% of these subjects may develop CKD, the endstage renal disease (ESRD) burden will rise and the health care system would need to take care of them. The approximate prevalence of CKD is 800 per million population (pmp), and the incidence of end-stage renal disease (ESRD) is 150-200 pmp. The most common cause of CKD in population-based studies is diabetic nephropathy and BP³

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. Hemodialysis program is halfway to being implemented. Thus, in India there is still a long way to go with respect to CKD. Screening the high risk individuals should be the priority as population screening might be too costly and not cost effective. The high risk groups include diabetics, hypertensive patients, the elderly, relatives of patients with CKD, and patients with autoimmune diseases that are likely to involve the kidney⁵

Risk factors for CKD

Risk factors for developing CKD differ between races and countries. It would be interesting to know the incidence of CKD and its causes in India, which is a densely populated country with low income, different food, cultural traditions and lifestyle habits. In contrast to high-income countries, patients with ESRD have to pay for dialysis and transplantation themselves. The currently reported incidence of CRF in India is based on extrapolated data from the US. As yet, no large-scale population studies are available⁴.

Sample

About Coorg district

Coorg or Kodagu district is located in the state of Karnataka- South India. The people of the Coorg are called Kodavas. It is a hilly and heavy rainfall area and habitat for more than seven different types of ethnic groups. The Altitude range from 220-2400 m above the sea level. The
annual rainfall in the Coorg district will be somewhere from 450 - 1230 mm and temperature range from 5 - 27 degrees Centigrade. Modern health care facility is still an outlandish in many parts of the district. Nevertheless Government has established few Primary Health Centres (Allopathic) they deficient in many elementary amenities including the Physicians. Our field investigation has made known that only 8.6% of the different ethnic groups have utilized these facilities so far in the studied area.

**Methodology**

A small sample study was conducted in Coorg districts by considering 150 CKD patients using purposive sampling technique. Blood reports were collected from the various diagnostics centers in Coorg dist. A questioner were used to get other data. Date analyzed using SPPS software.

**Major Findings**

- It was noted that 63 per cent of the CKD samples were belongs to low economic group ware as 37 were high income group;
- It was noted that 33 per cent of the samples were Illiterates, ware as remaining were moderate to highly educated ;
- It was noted that 43 per cent of the CKD samples were Diabetic patients since last 10 years while 57 percent were diabetic since last 15-18 years;
- It was noted that 53 per cent of the CKD samples were high B P patients since last 8 years while 47 percent had BP since last 5 years;
- It is found that 69 percent of CKD patients had high level of serum triglycerides, cholesterol, LDL, VLDL concentration ;
- It was noted that 23 per cent of the samples had family history of CKD and 17 percent were CKD due to Genetic reasons;
- It was noted that 58 per cent of the CKD samples had obese, and 42 percent had overweight;

- It was noted that 38 per cent of CKD patients had abnormal lipids and of the samples had obese, and 42 percent had abnormal cholesterol;

- It was noted that 78 per cent of CKD patients were not under medication for any kidney related diseases were as 22 per cent were on

- It was noted that 93 per cent of CKD patients said they did not have any awareness about CKD

**Conclusion**

To conclude, CKD is a problem of epidemic proportions in India, and with an increasing diabetes burden, hypertension, and growing elderly population it is going to increase even further. The burden of CKD is high and unique in each of our neighbours. There is a clear need for coordination, collaboration and integration of initiatives to fight the epidemic of CKD. Despite best immunosuppressant therapies, patients with kidney transplants still lose their transplanted kidney because of chronic rejection. Best strategies to maintain the function of transplanted kidneys and prevent chronic scarring are likely to emerge from on-going basic research and improved imaging methods. The best hope for reducing the human and economic costs of end-stage renal disease lies in prevention. Public education activities are especially targeting low income populations — who continue to be disproportionately affected by kidney disease should be done.

**References**


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**Interest of conflict: None**

Declaration

it is an original work and has not been sent to any other journal for publication.