



Prevention of Progression of Renal Diseases: Role of Nephrologist

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Editorial

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Editorial

Renal diseases can broadly be classified as acute (AKI and chronic CKD). In developing world AKI in community can result from many preventable causes and even progression towards CKD cannot be prevented in this population for various social and cultural reasons [1].

Among known causes of CKD reported from developing world are diabetes, hypertension and glomerular diseases, followed by obstructive nephropathy mainly resulting from renal calculus diseases [2].

All these diseases if identified at an early stage and treated meticulously on regular basis can be prevented from progression of CKD stages.

CKD from some communicable diseases like some viral or parasitic infections has also been reported from low middle income countries (LMICs) [3]. Another considerable fact is irrational use of over the counter medicines, especially for non-steroidal anti-inflammatory drugs and proton pump inhibitors, and use of herbal and traditional remedies for common ailment which can result in chronic interstitial nephritis and contribute to CKD; again a preventable cause.

In developed world primary prevention for ailments which can cause AKI or CKD has been addressed long time ago and remarkable decline in some conditions causing AKI like pregnancy related AKI from 22% in 1950's to 1% in 1990s, has been reported [4]. AKI secondary to acute gastroenteritis is almost non existing in developed world whereas we still see this on top of medical causes of AKI [1]. There has also been reported a 58% reduction in type 2 diabetes with implementation of modification in life style [5]. Diabetes is one of major contributor of CKD and its primary prevention can lead to decline in cases of CKD. So in LMIC if primary prevention is not achievable then secondary prevention by

detecting CKD at an early stage and proper management can leave a positive impact on progression of stage of CKD. Simple testing of urine with dipstick for albuminuria can detect CKD at an early stage and can be carried out at an outpatient department in LMICs as well.

Hypertension with almost equal contribution towards CKD [2] is also a simple measure to control. People with hypertension can be suggested to check their blood pressure regularly and if there are problems in frequent visiting to hospitals they can even send text message to their physicians and can get advice. In LMIC patients should be prescribed cheaper medications to achieve better compliance. Main target should be to achieve better and sustained control of blood pressure. Again urine dipstick for albuminuria can detect CKD at an early stage and should be addressed according to stage of CKD by doing serum creatinine levels and estimating glomerular filtration rate.

Large population based surveys to report actual prevalence of diabetes or hypertension from LMICs are scarce, many countries don't even have a central registry system for renal diseases thus it is difficult to spread layouts for major plans against progression of CKD. There is poor health funding in this part of world which has almost 80 % of total population of world. Screening program for CKD cannot be funded in absence of data available for prevalence of CKD. Another problem is lack of trained or skill health care professionals or certified nephrologists in many poor or LMICs. Still with limited resources, some experienced nephrologists continue to address the problems and solutions to this problem [6].

As CKD is progressing disease and with advancement of stage rate of related complications for example cardiovascular diseases (CVD) increases. Combination of CKD

and CVD increases mortality rate. Also progression of CKD towards end stage kidney failure requires lifelong renal replacement therapy, either in form of dialysis or renal transplant. While both are expensive treatments; with renal transplant there is added problem of shortage of organs. Almost 114,000 people in the United States are currently on the waiting list for a lifesaving organ transplant. Another name is added to the national transplant waiting list every 10 minutes. Only in America on an average, 20 people die every day from the lack of organ [7].

In 2014, in Southeast Asia, the rate of organ transplant was 3.8 patients per million populations, compared to 31.6 in the US and 27.9 in Europe [8].

With this disparity in number of patients getting transplants done in developed and developing world, it becomes more relevant to work hard towards early identification and then prevention of progression of CKD in end stage renal failure.

Nephrologist should play their role to train health care professional even at basic health care units where blood pressure measurements and urine dipstick tests for screening can be done easily and then the affected people should be referred to tertiary care center. If person cannot afford to travel to specialized centers then these health care workers should send email or text messages on phone or whatsapp (which is in common use in many people even at rural residential areas), to get experts' advice and convey it to concerned person.

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