EDITORIAL

Chronic Kidney Disease is on the Rise

Abraham Haileamlak, MD, Professor of Pediatrics and Child Health

Because of the increasing noncommunicable diseases (NCDs) and other risk factors, the burden of Chronic Kidney Disease (CKD) is increasing worldwide. Chronic kidney disease affects approximately 10% of the world's adult population (1). Several conditions such as diabetes, hypertension, vascular disease and glomerulonephritis are known to cause Chronic Renal Disease. In low-income countries, besides the above known causes, glomerulonephritis and interstitial nephritis are the cause for most cases of chronic kidney disease because of the high prevalence of infections. In Africa, Streptococcal infections, hepatitis B and C viruses and HIV are important causes of CKD (2). Despite these conditions, which are known to induce CKD, the etiology of CKD remains uncertain in most affected individuals, which deters research about how to prevent, mitigate, and cure CKD. Knowledge on the mechanisms leading to progressive loss of kidney function and its complications is also inadequate.

Although CKD affects all age groups and sexes, it is more prevalent in aged individuals. It is estimated that the worldwide prevalence to be 23-36% in people aged ≥64 (3). It is a worldwide public health problem and is associated with impaired quality of life and substantially reduced life expectancy at all ages. It is also associated with excess risk for cardiovascular disease and other conditions such as diabetes, infection, and cancer (4).

The concern is that the greatest burden of CKD will be borne by low-income countries like sub-Saharan Africa, where there are usually scant resources available to deal with the problem (2). It has been generally accepted in the medical literature and the community that CKD is

independently associated with premature mortality (5-7). It is within the top 20 causes of death worldwide (1).

In Ethiopia, as a consequence of post infectious glomerular conditions and with ever increasing NCDs like diabetes mellitus and hypertension, the number of patients with CKD is increasing. However, the preparedness in facilities, availability of supplies and the cost made RRT difficult.

Although renal replacement therapy (RRT) has been available for decades in high-income countries, it remained as luxury in many low and middle-income countries. In these countries, most people with kidney failure have insufficient access to lifesaving dialysis and renal transplantation (8,9). Globally, less than half of those people requiring RRT have access to treatment (9). The costs for treating CKD and its complications are unaffordable for governments and individuals in many parts of the world.

In low and middle-income countries, it is therefore, imperative that the focus be turned to the prevention of known risk factors of CKD, and the slowing of the progression of the early stages of CKD to end stage renal disease with its serious and costly complications. Besides preventing and controlling NCDs, early detection and treatment of glomerulonephritis and interstitial nephritis could help to minimize the burden of CKD. While focusing on prevention, countries need to work on establishment of renal replacement therapy. A sufficient amount of time would also need to elapse since an intermediate endpoint such as CKD was prevented, before one would expect to see a reduction in subsequent attributable deaths.

Nations with emerging economies urgently need comparative effectiveness research that leads to solutions for early diagnosis and successful interventions

The current issue of the journal, the six regular issue for the year 2018, contains an editorial, thirteen original articles, a review and a case report focusing on various topics. One of the original articles deals with chronic kidney disease in northwest Ethiopia.

I invite readers to read through these articles and appreciate or utilize the contents. I also urge readers to forward comments and suggestions to the editor or the corresponding authors.

REFERENCES

- 1. GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet*, 2016;388(10053):1545.
- 2. Barsoum RS. Chronic kidney disease in the developing world. *N Engl J Med*, 2006;354(10):997-9.
- 3. Zhang QL, Rothenbacher D. Prevalence of chronic kidney disease in population-based studies: systematic review. *BMC Public Health*, 2008;8: 117.
- 4. Chronic Kidney Disease Prognosis Consortium, Matsushita K, van der Velde M, et al. Association of estimated glomerular filtration rate and albuminuria with all-cause and cardiovascular mortality: a collaborative meta-analysis. *Lancet*, 2010; 375: 2073–81.
- 5. NKF. K/DOQI clinical practice guidelines for chronic kidney disease: evaluation, classification, and stratification. *Am J Kidney Dis*, 2002;39: S1–266.
- 6. Go AS, Chertow GM, Fan D, McCulloch CE, Hsu CY. Chronic kidney disease and the risks

- of death, cardiovascular events, and hospitalization. *N Engl J Med*, 2004;351: 1296–1305.
- 7. Ruilope LM, Salvetti A, Jamerson K, Hansson L, Warnold I, *et al.* Renal function and intensive lowering of blood pressure in hypertensive participants of the hypertension optimal treatment (HOT) study. *J Am Soc Nephrol*, 2001;12: 218–225.
- 8. Liyanage T, Ninomiya T, Jha V, et al. Worldwide access to treatment for end-stage kidney disease: a systematic review. *Lancet*, 2015;385: 1975–82.
- 9. Jha V, Garcia-Garcia G, Iseki K, et al. Chronic kidney disease: global dimension and perspectives. *Lancet*, 2013; 382: 260-72.