

Chronic Kidney Diseases as a Worldwide Epidemiological Problem

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Chronic kidney disease (CKD) is a global epidemiological health problem with increasing incidence and prevalence. While cancer, cardiovascular and cerebrovascular diseases (CVDs) are the major causes of mortality, CKD is now presumed to be another leading cause of mortality, leading to tremendous medical costs.

Since high mortality in CKD stems mostly from poor prognosis in dialysis patients, the National Kidney Foundation launched the Dialysis Outcomes Quality Initiative (DOQI) and published its first clinical practice guidelines (CPGs) in 1997. It is, however, now evident that even earlier stages of CKD are significantly associated with higher incidence of morbidity and mortality from CVDs rather than progression to end stage renal disease (ESRD). DOQI was therefore later modified to Kidney Disease Outcomes Quality Initiative (K/DOQI) and its first CPGs were published in 2002.

Since the CKD epidemic, it has been clarified that the poor outcomes, pathogenesis and treatment are universal, establishing a global initiative to increase the efficiency of utilizing global expertise and resources for improvement of outcomes. Thus Kidney Disease: Improving Global Outcomes (KDIGO) was launched in 2003. Thereafter, CPGs from various regions of the world will be integrated into the KDIGO guidelines.

On the other hand, more attention should be paid to racial/ethnic disparities in the epidemiology of CKD. Although these disparities are reported in the US and Europe, epidemiological studies of CKD are lacking in the rest of the world. The Japanese Society of Nephrology recently reported the different characteristics of CKD in the general Japanese population from those in the Northern American or European populations. The prevalence of ESRD in Japan, for example, is second highest in the world, and the prevalence of stage 3 CKD is even much higher in Japan (20%) than the Northern American population (4%), however progression to ESRD is not common until the CKD is defined as a condition with an estimated glomerular filtration rate (eGFR) below 50 rather than 60 ml/min/1.73m². Before we implement the global CPGs, there is also a need to consider significant differences in clinical practice patterns, especially those in developing countries, which mainly come from socioeconomic background.

It is regardless to say that the ultimate success of the global initiative will depend on the cooperation and support of local organizations worldwide as well as global organizations such as International Society of Nephrology or WCIM. Each member should recognize the scope and size of this pandemic.