High Prevalence and Low Awareness of CKD in Taiwan: A Study on the Relationship Between Serum Creatinine and Awareness From a Nationally Representative Survey

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Background: The burden of chronic kidney disease (CKD) is a global challenge. Empirical evidence of low CKD awareness rates in developed countries speaks for an urgent need to strengthen strategies for CKD identification and prevention. The aim of this study is to estimate the awareness rate of CKD in Taiwan to promote early detection of CKD in this country.

Methods: Data from a nationally representative survey were used for analysis. The study included 6,001 subjects. The simplified Modification of Diet in Renal Disease equation was used to define glomerular filtration rate (GFR) and CKD stages according to criteria of the US National Kidney Foundation. Descriptive methods were used to analyze data. Results: The prevalence of CKD stages 3 to 5 in Taiwan is 6.9% (95% confidence interval, 4.4 to 9.4). Awareness rates for CKD in Taiwan are low: 8.0% for individuals with stage 3, 25.0% for those with stage 4, and 71.4% for those with stage 5. Awareness rate is related closely to serum creatinine level: those with creatinine levels greater than 1.6 mg/dL (>141 μmol/L) are more likely to be informed of having a kidney disease.

Conclusion: The high prevalence and low awareness of CKD in Taiwan explicitly show the need to advocate more strongly for CKD prevention and education for both physicians and the populace. Establishment of a mandated automatic GFR reporting system may be the first priority we need to accomplish in Taiwan to improve kidney well-being. Am J Kidney Dis 48:727-738.

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The increasing prevalence of end-stage renal disease (ESRD) is a global challenge. In the United States, it is claimed that chronic renal diseases are the nation’s ninth leading cause of death, and it was estimated that health care for patients with ESRD will cost $28.3 billion annually by 2010. In the United Kingdom, the annual incidence of ESRD has doubled during the past decade. In Taiwan, chronic renal diseases have been the eighth leading cause of death since 1997. Dialysis alone consumes about 7.21% of Taiwan’s annual budget for national health insurance, with only a small proportion (0.15%) of the population needing treatment. Both the incidence and prevalence of ESRD in Taiwan are among the highest in the world. The epidemiological pattern of ESRD in Taiwan, although not worse than in other developed countries, has adverse impacts not only on the population’s health, but also as a financial burden on the nation.

Among many reasons contributing to the high prevalence and incidence of ESRD in Taiwan, the high prevalence of chronic kidney disease (CKD) may be one of the most important factors. Yang et al reported that the point prevalence of CKD stages 3 to 5 in Taiwan was 6.43%, which was much greater than that in the United States (the prevalence of CKD stages 3 to 4 in the United States was 3.83% to 4.39%, estimated by the National Health and Nutrition Examination Survey [NHANES III] data). In the face of the high prevalence of CKD, 1 effective strategy for...