

Editorial



Potential Role of Psychosocial Factors on Health-Related Quality of Life in Hemodialysis Patients

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After dialysis is initiated, patients with chronic kidney disease (CKD) experience considerable inconveniences. Hemodialysis (HD) patients have to spare four hours a day, three days a week regardless of individual schedules. In continuous ambulatory peritoneal dialysis patients, people must carry three, two-liter bags of dialysis fluid to perform day-time dialysis. This is not only inconvenient, but it also becomes increasingly burdensome because people get frailer¹ as dialysis duration increases because dialysis initiation cannot halt the deterioration of the underlying causes of CKD. In addition, it is hard for dialysis patients to maintain their job, which ultimately lowers their socioeconomic status.² Therefore, it is natural for CKD patients to be unhappy, and the overall health-related quality of life (HRQL) cannot be high with the progression of CKD.³

Like survival or cardiovascular disease development, HRQL has been accepted as an important patient reported outcome measure (PROM) in the nephrology field.⁴ This may be because longevity cannot always guarantee a valuable life. In addition, decreased HRQL itself is an independent factor for the increased risk of cardiovascular disease and mortality in CKD patients.⁵ Therefore, it is important to improve HRQL in CKD patients. Among others, intensive HD has been consistently suggested to improve HRQL in HD patients.⁶ However, increasing dialysis dose is not always possible because of patient and social factors. Although other medical approaches including anemia correction and applying hemodiafiltration have been attempted, HRQL has been seldom improved. This suggests that a different approach other than medical care is needed.

According to World Health Organization (WHO), HRQL can be assessed by physical, psychological, and social domains of people's perspective. As one important PROM, HRQL should be measured appropriately. However, there have been no universal diagnostic criteria to define HRQL in CKD patients. Also, the diagnostic tools, mostly multidimensional questionnaires, have not been agreed upon by researchers, which limits the compatibility across the studies. Nonetheless, I believe studies regarding the nature of HRQL in CKD patients should be continued to identify potential modifiable factors. In this regard, Kim et al.⁷ in the current issue of *Journal of Korean Medical Science* has reported clinically meaningful research results. As the authors noticed, there have been limited studies which highlighted the role of psychosocial factors on HRQL in CKD patients. Kim et al.⁷ have measured HRQL

in 102 HD patients using WHO Quality of Life Scale-Abbreviated Version (WHOQOL-BREF) which consists of physical health, psychosocial, social and environmental domain scores. The evaluated psychosocial factors were measurements for anxiety and depression, perceived social support, cognitive function, sleep quality, and caregivers' burden. Using canonical correlation analysis, WHOQOL-BREF was significantly correlated with psychological factors, particularly in the first canonical function ($P < 0.001$). Although medical factors were not associated with WHOQOL-BREF, it is still correlated with psychosocial factors, suggesting indirect effect of medical factors on HRQL in CKD patients.

The study by Kim et al.⁷ has several strengths. First, they extensively evaluated psychosocial factors in CKD patients. Multidimensional assessment may highlight the neglected role of various psychosocial factors on HRQL in CKD patients. Second, they have introduced a new diagnostic tool in the nephrology field. To date, the most validated and frequently used questionnaire in CKD patients has been Kidney Disease Quality of Life Short Form-36 (KDQL SF-36). The simpler tool such as EuroQoL-5 Dimensions (EQ-5D) index has also been used. However, there have been no superior diagnostic tools to represent HRQL in CKD patients. Therefore subsequent studies to test the diagnostic superiority among KDQL SF-36, EQ-5D index, or WHOQOL-BREF are required. Finally, using multivariate analysis, Kim et al.⁷ reported independent association between psychosocial factors and HRQL. The study by Kim et al.⁷ also has some limitations. First, they used patients' data from a single center. Also the sample size was too small. As the authors noted, selection bias can considerably affect the study results. Second, the study design was cross-sectional which could not guarantee causal-relationship. Therefore, I hope subsequent interventional studies are conducted.

Dialysis patients who are in end-stage of CKD are unhappy and desperate. Intensive medical care may not be the only answer to improve HRQL in these people. Therefore, physicians need to pay attention to the other treatment options including psychological support and/or medication with considerate social support.

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