

Association of Moderate Renal Dysfunction with Impaired Preference-Based Health-Related Quality of Life: 3rd Korean National Health and Nutritional Examination Survey

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Background: Only a few large-scale studies have investigated the association between health-related quality of life (HRQOL) and renal function. Moreover, the HRQOL of patients with moderate renal dysfunction is frequently underestimated by healthcare providers. This study aimed to assess the impact of renal function on preference-based HRQOL in Korean adult population.

Methods: We analyzed data for 5,555 adults from the 3rd Korean National Health and Nutritional Examination Survey 2005. The EuroQol-5D (EQ-5D) score was used to evaluate HRQOL. The population was stratified into three groups according to the estimated glomerular filtration rate (eGFR): ≥ 90.0 , 60.0–89.9, and 30.0–59.9 mL/min/1.73m². Individuals with advanced renal dysfunction were excluded from the analysis.

Results: The proportions of participants who reported problems in each of the five EQ-5D dimensions increased significantly with decreasing eGFR. On the other hand, a significant decrease in EQ-5D utility score was observed among participants with eGFR of 30.0–59.9 mL/min/1.73m². Participants with eGFR of 30.0–59.9 mL/min/1.73m² had an almost 1.5 times higher risk of impaired HRQOL (the lowest quartile of EQ-5D utility score) compared to those with eGFR ≥ 90 mL/min/1.73m², after adjustment for age, gender, health-related behaviors, socioeconomic and psychological variables, and other comorbidities. Among the five dimensions, an eGFR of 30.0–59.9 mL/min/1.73m² was an independent determinant of self-reported problems in the mobility and pain/discomfort dimensions.

Conclusion: Moderate renal dysfunction seems to be an important determinant of impaired HRQOL in general population and may have an impact on the mobility and pain/discomfort dimensions of HRQOL.

Key Words: CKD, EuroQol-5D, HRQOL