

Abstract Submission No.: A-1157**The Impact of Body Mass Index on Mortality in Accordance with Age in Hemodialysis Patients: Data from Korean Renal Data System (KORDS)**

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Objectives : We aimed to investigate the association between body mass index (BMI) and all-cause mortality, stratified by age, in Korean hemodialysis (HD) patients.

Methods : A study included 66,129 hemodialysis patients from 2001 to 2022, using 2023 Korean Renal Data System (KORDS). Patients were grouped by age: <65 years (the young group, n = 24,589, 37.2%), 65–74 years (the younger-old group, n = 17,732, 26.8%), and ≥75 years (the older-old group, n = 23,808, 36.0%). Within each age group, patients were further divided into four BMI quartiles. Baseline characteristics, including age, sex, primary renal disease, cause of death, were collected according to BMI quartiles. Survival curves were generated for each BMI quartiles within each age group. Cox proportional hazard ratios (HR) for all-cause mortality, adjusted for potential confounders, were calculated for each BMI quartile within each age group.

Results : Median follow up period was 3.4 years, with a total of 14,360 deaths (21.7%). Baseline characteristics were obtained based on BMI quartiles. Lower BMI quartiles were associated with older age, a lower proportion of diabetes mellitus, and a higher proportion of hypertension and glomerulonephritis as the primary renal disease compared to the highest BMI quartile. Survival analysis revealed poorer outcomes in lower BMI quartiles across all age groups. In Cox regression, adjusted for multiple variables, the lowest BMI quartile had significantly higher HR for all-cause mortality compared to the highest BMI quartile in the young (HR: 1.257) and the older-old group (HR: 1.189), except the younger-old group. A lower BMI showed a strong correlation with a higher HR for all-cause mortality, particularly in the young group compared to the younger-old or older-old groups.

Conclusions : The lowest BMI quartile was associated with higher all-cause mortality in HD patients. Furthermore, this impact was independently more pronounced in the young patients compared to elderly.