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P063**Survival Advantages of Body Fat in Hemodialysis Patients**

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In maintenance hemodialysis (MHD) patients a larger body size is associated with better survival but a worse self-reported quality of life (QoL). It is not clear whether muscle mass or body fat confers the survival advantage. We hypothesized that both a low baseline body fat and losing fat over time are associated with higher mortality but better QoL. Among 535 MHD patients, the body fat was measured directly using near infra-red interactance and QoL by SF36. Patients were followed for up to 30 months. Across four 12% increments of body fat at baseline, the reported QoL scores were progressively lower ($p < 0.01$). After multivariate adjustment for case-mix and surrogates of muscle mass and inflammation (mid-arm muscle circumference, serum creatinine and proinflammatory cytokines), 46 patients with a body fat $< 12\%$ had 4 times higher death hazard ratio (HR) compared to 199 patients with a body fat between 24 and 36% (HR: 4.01, 95% confidence interval [CI]: 1.61-9.99, $p = 0.003$). Among 411 MHD patients whose body fat was re-measured after 6 months, a fat loss (-1%) compared to fat gain ($+1\%$) was associated with 2-times higher death risk after multivariate adjustment (HR: 2.06, 95% CI: 1.05-4.05, $p = 0.04$). Hence, A low baseline body fat and fat loss over time are associated with higher mortality in MHD patients even after adjustment for case-mix and surrogates of muscle mass and inflammation, whereas a worse QoL score is reported by MHD patients with a higher body fat. Obesity management in dialysis patients may need reconsideration.