

Mortality-Predictability of Weight Gain vs Weight Loss over 6 Months in Maintenance Hemodialysis (MHD) Patients

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Background

Many observational studies have indicated that higher body mass index (BMI) at baseline is associated with greater survival in maintenance hemodialysis (MHD) patients.

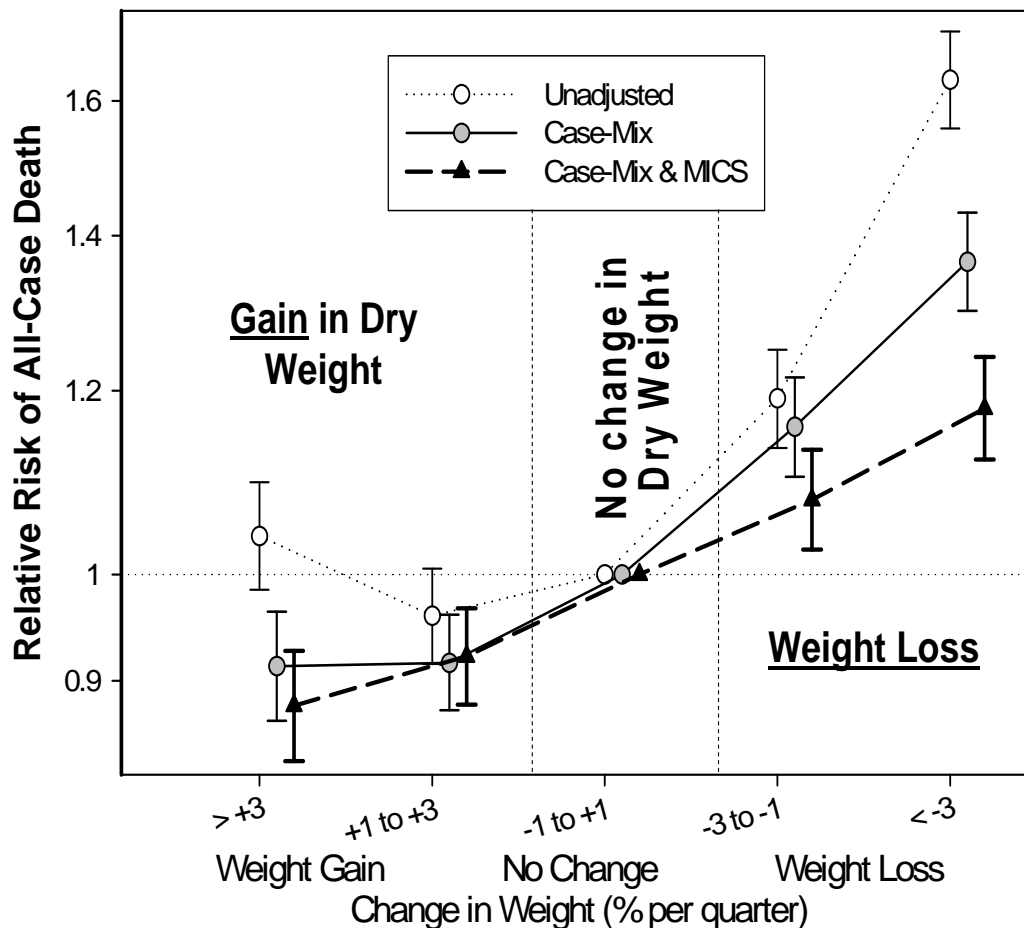
We hypothesized that weight loss vs. gain over time is related to worse vs. greater survival, respectively.

Methods

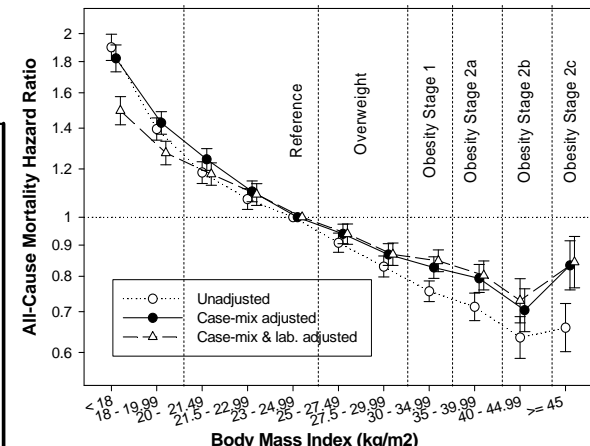
- In 99,412 MHD patients in all DaVita® clinics between 7/2001 and 6/2006, we examined the mortality-predictability of change in 3-month averaged post-HD dry weight from the baseline to the following calendar quarter, adjusted for demographics and comorbid states (case-mix) as well as for surrogates of malnutrition-inflammation complex syndrome (MICS)
- All measures were averaged into one single value per patient during the entire follow-up time, i.e., up to 5 years
- Analytical Method: Cox survival modeling
- The death hazard ratio (and 95% CI) of the serum calcium were calculated at 3 levels of multivariate adjustments

Results

- The fully adjusted 5-yr death hazard ratios (HR) (& 95% confidence levels) of weight loss >3% (compared to stable weight +/-1% change) was 1.18 (1.12-1.24) and for weight gain >3% was 0.88 (0.83-0.93) (Figure)



Survival of 121,762 hemodialysis patients over 5 yrs (7/2001-6/2006)



Conclusions

These findings, even though observational, engender the hypothesis that interventions to increase dry weight may improve longevity in MHD patients.

Clinical trials need to examine whether dry-weight increasing intervention can improve survival in ESRD patients.

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