Frailty Is an Independent Risk Factor for Mortality, Cardiovascular Disease, Bone Disease, and Diabetes Among Aging Adults With Human Immunodeficiency Virus

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Abstract

Background

We characterized associations between frailty and incident cardiovascular disease (CVD), diabetes mellitus (DM), bone disease, and mortality within a cohort of aging persons with human immunodeficiency virus (PWH).

Methods

Participants underwent frailty evaluations using the Fried frailty assessment (baseline and annually). Frailty was defined as having ≥3 frailty criteria. Clinical outcomes of mortality, CVD events, DM, and bone disease events were recorded throughout the study period (baseline to most recent study or clinic visit, or date of clinical outcome, whichever came first). Poisson regression models were used to evaluate associations between baseline frailty, change in frailty score over 48 weeks, and each clinical outcome.

Results

Among 821 men and 195 women (median age 51 years), 62 (6%) were frail at baseline. Frailty scores increased by ≥1 component among 194 participants (19%) from baseline to 48 weeks. Baseline frailty was associated with an increased risk of incident CVD and DM, with a trend toward a significant association with bone events. Among frailty components, slow gait speed was associated with incident DM and borderline associated with incident CVD. An increase in frailty from baseline to week 48 was associated with mortality but not with the other clinical outcomes.

Conclusions

Baseline frailty was associated with multiple adverse health outcomes (incident CVD, DM, and bone disease), while increase in frailty score was associated with mortality among PWH engaged in care. Incorporation of frailty assessments into the care of PWH may assist in improvement of functional status and risk stratification for age-related chronic diseases.