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"Predictors of Frailty Transitions Among People Living With HIV"

Background: Frailty is a geriatric syndrome typically marked by increased vulnerability to environmental stressors generally attributed to a diminished physiological reserve. People living with HIV (PLH) experience a precocious onset of frailty. Several biological and sociobehavioral factors have been associated with frailty in PLH. For example, we have recently reported that lifetime alcohol use increases the prevalence of frailty in PLH. The objective of this analysis was to identify potential predictors of frailty progression in PLH using a preliminary cross-sectional analysis.

Methods: The New Orleans Alcohol Use in HIV (NOAH) Study collects a rich dataset that includes extensive survey-based and biological variables through serial testing of a cohort of PLH. We generated a list of potential predictors of frailty progression by identifying variables available in the NOAH dataset that had been previously reported as associated with either frailty or older chronological age. The Deficit Index (DI) was the chosen method by which frailty would be measured in our population. A preliminary cross-sectional analysis was performed between the DI and the previously chosen biomarkers to characterize the best potential biological predictors of frailty within our population.

Results: 390 participants completed baseline testing and were found to have valid DI58 results within the NOAH Database. Demographics were mostly male (68.7%) and of African American descent (83.3%). For analysis, DI scores were separated into terciles, each of which characterized varying degrees of frailty. Out of six variables (albumin, WBC count, total cholesterol, CD4 cell count, serum sodium levels, and creatinine) analyzed with respect to the DI, albumin (P=0.053) and creatinine (P=.01) were found to correlate with varying degrees of frailty.

*Conclusion***:** Albumin and creatinine have found to have a correlation with frailty in respect to the DI in this preliminary study. In the future, we hope to analyze more biomarkers cross-sectionally and then also inspect to their longitudinal impacts on frailty transition.