

MOBILITY SCREENING FOR FALL RISK ASSESSMENT IN A POPULATION-BASED SAMPLE OF OLDER ADULTS: AN ANALYSIS FROM THE CLSA

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Existing guidelines for fall prevention in older adults recommend mobility screening for fall risk assessment; however, there is no consensus on which test to use and at what cut-off. This study aimed to determine the accuracy and optimal cut-off values of commonly used mobility tests for predicting falls in the Canadian Longitudinal Study on Aging (CLSA). Mobility tests at baseline included the Timed Up and Go (TUG), Single Leg Stance (SLS), chair-rise, and gait speed test. Inclusion criteria were: age ≥ 65 years and history of a fall or mobility problem at baseline. Accuracy of fall prediction at 18-months for each mobility test was measured by the area under the receiver operating curve (AUC). Of 1,121 participants that met inclusion criteria (mean age 75.2 ± 5.9 years; 66.6% women), 218 (19.4%) participants reported ≥ 1 fall at 18-months. None of the mobility tests achieved acceptable accuracy for identifying individuals with ≥ 1 fall at follow-up. Among women 65-74 and 75-85 years, the TUG identified recurrent fallers (≥ 2 falls) with optimal cut-off scores of 14.1 and 12.9 seconds (both AUCs 0.70), respectively. Among men 65-74 years, only the SLS showed acceptable accuracy (AUC 0.85) for identifying recurrent fallers with an optimal cut-off of 3.6 seconds. Our findings indicate that for a population-based sample of community-dwelling older adults, commonly used mobility tests do not have sufficient accuracy for identifying fallers. The TUG and SLS can identify older adults at risk for recurrent falls, however their accuracy and cut-off values vary by age and sex.

SESSION 2925 (PAPER)

FRAILTY

BEDSIDE ULTRASOUND MEASURES OF MUSCLE MASS AND FRAILTY MEASURES IN COMMUNITY-DWELLING OLDER ADULTS

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The age-associated loss of muscle mass and strength in older adults is called sarcopenia, and it is associated with increased rates of falls, fractures, hospitalizations and death. Sarcopenia is one of the most common physical etiologies for increased frailty in older adults, and some recent work has suggested the use of Point-of care ultrasound (PoCUS) measures as a potential measure of muscle mass. The objective of this study was to examine the association of PoCUS measures of muscle thickness (MT) with measures of frailty in community-dwelling older adults. We recruited 150 older adults (age ≥ 65 ; mean age 80.0 ± 0.5 years, 66 women, 84 men) sequentially from 5 geriatric medicine clinics (Vancouver General Hospital). We measured lean muscle mass (LMM, by bioimpedance assay) and an ultrasonic measure of muscle quantity (MT, vastus medialis muscle thickness) in all subjects, as well as two outcome measures

of frailty (FFI, Fried Frailty Index; RCFS, Rockwood Clinical Frailty Scale). In our models, MT showed an inverse correlation with the FFI (Standardized $\beta = -0.2320 \pm 0.107$, $p = 0.032$) but no significant correlation with the RCFS (Standardized $\beta = -0.025 \pm 0.086$, $p = 0.776$). LMM showed no significant association with either FFI (Standardized $\beta = -0.232 \pm 0.120$, $p = 0.055$) or RCFS (Standardized $\beta = -0.043 \pm 0.119$, $p = 0.719$). Our findings indicate that PoCUS measures show potential as a way to screen for physical manifestations of frailty and might be superior to other bedside methods such as bioimpedance assay. However, PoCUS measures of muscle thickness will likely miss patients showing frailty in the much broader context captured by the RCFS.

FRAILTY AND TRAJECTORIES OF BLOOD PRESSURE AMONG OLDER MEXICAN AMERICANS OVER TIME.

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The objective of this study was to examine whether blood pressure (BP) trajectories differ by frailty status among older Mexican Americans. Data are from an 18-year prospective cohort study of 1,781 non-institutionalized Mexican American aged ≥ 67 years from the Hispanic Established Population for the Epidemiological Study of the Elderly (1995/96-2012/13). Frailty was defined as meeting three or more of the following: unintentional weight loss of >10 pounds, weakness, self-reported exhaustion, low physical activity, and slow walking speed. General linear mixed models were used to estimate trajectories of systolic and diastolic BP over an 18-year period as a function of frailty status. All variables were analyzed as time-dependent covariates except for gender and education. At baseline, 46.3% participants were non-frail, 44.8% were pre-frail, and 9.0% were frail; and the mean of systolic and diastolic BP was 136.9 mmHg (SD=18.6) and 77.3 mmHg (SD=12.2), respectively. Frail participants had greater systolic and diastolic BP decline over time than non-frail (estimate=-3.94, SE=0.88, p -value= <0.0001 and estimate=-1.32, SE=0.54, p -value=0.0138, respectively); and pre-frail participants had greater systolic BP decline than non-frail (estimate=-1.51, SE=0.54, p -value=0.0049), after controlling for all covariates. Those with high body mass index and hypertension with and without treatment had increased levels of systolic and diastolic BP over time. Older age, female gender, arthritis, diabetes, and stroke had decreased levels of diastolic BP over time. This study showed progressive decline in systolic and diastolic BP in frail compared to non-frail older Mexican Americans, which might have implications when treating frail older adults with hypertension.

FRAILTY AS A MODERATOR OF THE RELATIONSHIP BETWEEN SOCIAL ISOLATION AND HEALTH OUTCOMES

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Previous studies have reported that social isolation is a predictor of adverse outcomes, which is also closely associated with frailty. Very little is known about the moderating role of frailty on the impact of social isolation on health. We performed a cross-sectional analysis of the first wave of