SESSION 2888 (POSTER)

FRAILTY AND SARCOPENIA

EFFECTIVENESS OF A 6-MONTH MULTICOMPONENT TRAINING ON PHYSICAL FRAILTY IN OLDER ADULTS WITH COGNITIVE IMPAIRMENT

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Multicomponent training (MT) that combines aerobic, strength, postural, and balance exercises seems to be safe and effective to prevent and even reverse early stages of frailty, as well as counteract the physical consequences of cognitive impairment. This study analyzes the effectiveness of MT on physical frailty in older adults diagnosed with cognitive impairment. Forty-nine subjects (34 women) diagnosed with mild cognitive impairment (MCI) or dementia were allocated into exercise group (EG; 75.80±6.60 years; age range: 61-90) or a control group (CG; 82.56±5.45 years; age range: 73-90). EG was submitted to a 6-month MT intervention (2x/week, 50min). CG had a monthly recreational session. Sample mean of MMSE at baseline was 21.02 (±4.98). Participants were categorized as frail, pre-frail and robust according to a validated physical performance battery - Short Performance Physical Battery (SPPB). Overall, in baseline there were 12.5% frail and 37.5% pre-frail individuals in the EG group; in the CG there were 36% and 32%, respectively. Data from SPPB total score revealed that EG group increased the performance over time [$t(23)=3,94$; $\Delta=1.21$ (±1.50); $p<0.001$], as opposite to CG individuals [$t(24)=-2.26$; $\Delta=-0.92$ (±2.04); $p=0.034$]; also, there were 8.3% frail and 29.2% pre-frail in EG, and 40% and 32% in CG after intervention. By improving lower extremity functionality of patients diagnosed with cognitive impairment, MT intervention may be an important non-pharmacological strategy to improve physical frailty status and modify subjects' condition from frail to pre-frail or even robust. Supported by IPDJ & FCT: CIAFEL (FCT/UIDB/00617/2020), "Body and Brain" (POCI-01-0145-FEDER-031808), PhD Grant (SFRH/BD/136635/2018).

FRAILTY CHANGE SCORES OVER LONG-TERM FOLLOW UP IN PATIENTS WITH CORONARY ARTERY DISEASE

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Background: Frailty assessment has often been performed only at baseline in cohort studies. Little is known regarding factors associated with changes in frailty indices over follow up in patients with coronary artery disease (CAD). Methods: Between 11/2008 - 8/2012, 142 community-dwelling adults ≥65 years of age with prior history of CAD (angina or revascularization) participated in a study of frailty assessment at Mayo Clinic Health System in La Crosse, WI. A sample of participants (n=45) were included for frailty re-assessment using the Fried frailty criteria approximately 5 years after their baseline measures. Frailty classification was based on absence of deficits (non-frail), 1-2 deficits (intermediately frail), or 3 or more deficits (frail). Factors associated with a change in frailty indices were studied. Results: There were 45 patients that had a second assessment of frailty indices. At baseline, 24 patients (60%) were not frail while 16 patients (40%) had at least 1 frail feature. At follow up, 20 patients (50%) were not frail while 20 patients (50%) had a frail feature. Those improving were more often being married, had prior revascularization, and were without angina. Interval development of slower gait speed ($r = 0.46$; $p=0.004$) and decreased grip strength ($r = -0.39$; $p = 0.01$) were associated with worsening frailty. Conclusions: Older adults with CAD are not often frail by standard criteria; however, incident deficits develop during long term follow-up. Spousal support, absence of angina, and change in functional indices are less often associated with frailty features.

FRAILTY, WITH OR WITHOUT COGNITIVE IMPAIRMENT, IS A STRONG PREDICTOR OF FUTURE RECURRENT FALLS

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The associations between physical frailty and cognitive impairment with falls history are well-established. However, their associations with prospectively ascertained recurrent falls are unknown. We used data from the National Health Aging Trends Study (NHATS) and marginal means/rates model to analyze the associations between frailty and cognitive impairment and recurrent falls over 6 years (2012-2017). Of the 6,000 older adults, 1,787 (29.8%) had cognitive impairment only, 334 (5.6%) had frailty only, 615 (10.3%) had both, and 3,264 (54.4%) had neither. At baseline, compared to the group without cognitive impairment or frailty, individuals with both frailty and cognitive impairment were more likely to have a history of falls (odds ratios (OR)=2.48, 95% confidence interval (CI)=1.98-3.11), followed by those with frailty only (OR=1.53, 95% CI=1.19-1.97), and those with cognitive impairment only (OR=1.22, 95% CI=1.05-1.41), after adjusting for age, sex, race, education, living alone, obesity, comorbidity, and mobility disability. In longitudinal analysis, those with frailty and cognitive impairment alone or together at baseline had higher rates of recurrent falls than those without cognitive impairment or frailty (cognitive impairment only: rate ratios (RR)=1.07, 95% CI=1.00-1.13; frailty only: RR=1.31, 95% CI=1.18-1.44; both: RR=1.28, 95% CI=1.17-1.40). The risk appeared to be comparable between those with frailty alone or those with frailty and cognitive impairment. These findings offered robust evidence for a strong predictive association between frailty and recurrent falls in non-institutionalized older adults, and the association remained strong with or without comorbid cognitive impairment.