Sarcopenic obesity and falls among community-dwelling older adults

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Aims: To determine the relationship between sarcopenia, obesity and falls among community-dwelling older adults

Methods: Cross-sectional analysis was conducted from the first-wave data of a longitudinal cohort study recruited through stratified random sampling from electoral rolls. The presence of falls in the preceding 12 months was recorded alongside socio-demographics, medical history, weight, height, grip strength, physical assessment and body composition. Sarcopenia was defined as muscle mass < 10.76 kg/m² (men) or < 6.76 kg/m² (female), muscle strength < 30 kg (men) and < 20 kg (women) and (timed-up-and-go > 7.5s) according to published criteria.

Results: Data from 1340 participants with the mean ± standard deviation age (68.38 ± 7.14) years were included. Obesity and sarcopenia were associated with increased risk of falls (aOR=3.400, 95% confidence interval, CI: 1.925–8.932), (aOR=1.502, 95% CI: 1.063–2.122) respectively after adjustment for the co-variates.

Logistic regression analysis using dummy variables revealed significant increased risk of falls among the non-obese/sarcopenic (OR: 1.960, 95% CI: 1.232, 3.116) and sarcopenic obesity (OR: 1.818, 95% CI: 1.201, 2.753) compared to the non-obese/non-sarcopenic group. Following adjustment for differences in demographics and comorbidity, sarcopenic obesity (aOR: 1.601, 95% CI: 1.001, 2.565) remained an independent risk factor for falls.

Conclusion: Previous studies evaluating the relationship between body weight and falls have yielded conflicting results. Our study had demonstrated a significant association between sarcopenia and obesity with increased falls risk, with sarcopenic obesity emerging as an independent risk factor for falls. While our findings need to be verified through prospective studies, future studies should also consider interventions on sarcopenic obesity for falls prevention.

Impact of acute geriatric service to residential aged care facilities on emergency department and subsequent hospitalisation rates as well as cost-benefit analysis

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Aims: The primary aim of the study is to share our experience of establishing an acute outreach service to nursing homes and secondary aim to evaluate the impact of such service in emergency department presentation.

Methods: Data from our outreach service was drawn from pre-existing database set up for audit purposes from 2013 to 2017. Data was separated into two periods with establishment of subacute service versus establishment of acute service. Categories of diagnoses, demographics, safety issues, treatment length, intervention type, transfers to hospital for further treatment were analysed. Both student t-test and negative binomial regression models were used to compare the impact of the establishment of acute model versus subacute model in terms of emergency department presentation via ambulance and hospital admissions. A cost-benefit analysis was also performed.

Results: Of the 986 acute patients treated in 12 nursing homes over a 23 month period, the acute geriatric outreach service was shown to be safe, with little adverse events (1 allergic reaction) and less than 6% of patients required transfer to hospital. The acute service decreased emergency department presentation of nursing home patients by 10% compared to the subacute service (IRR=0.90; 95% CI: 0.84 to 0.96; p = 0.001). Cost-benefit analysis showed for every $1 spent, a saving of $5 was realised from reduction in ambulance transfers, emergency presentations and hospital admissions.

Conclusion: An acute service to nursing home led by a geriatrician is safe, efficient and cost-effective in managing nursing home residents’ acute medical conditions. It saves hospital emergency presentations and admissions.