

Epidemiology

53 CARDIOMETABOLIC AND SOCIAL DETERMINANTS OF FRAILTY: RESULTS FROM A POPULATION-BASED STUDY OF ELDERLY BRITISH MEN

S. E. Ramsay, D. S. Arianayagam, O. Papacosta, L. T. Lennon, S. G. Wannamethee
University College London (UCL)

Background: Frailty increases the risk of disability, long-term care and hospitalisations in the elderly and is recognised as an important challenge to improving healthy ageing. While frailty is known to be associated with chronic diseases such as cardiovascular disease (CVD), risk factors underlying these associations remain unclear. Our aim was to assess the prevalence of frailty and investigate lifestyle, social and cardio-metabolic risk factors associated with frailty.

Methods: Data come from a socially representative sample of 1622 men from 24 British towns aged 71–92 between 2010 and 2012. Frailty assessment was based on the Fried phenotype comprising weight loss, grip strength, exhaustion, slowness and low physical activity.

Results: Among 1622 men, 19% were frail and 54% were pre-frail. Compared to non-frail men, those with frailty had a higher odds of obesity (BMI ≥ 30 kg/m²; odds ratio (OR) 2.03, 95%CI 1.38–2.99), high waist circumference (≥ 102 cm; OR 2.30, 95%CI 1.67–3.17), and having low social network (OR 2.16; 95%CI 1.46–3.17). Frail individuals also had significantly higher odds of chronic conditions including CVD, diabetes, chronic kidney disease, anaemia, asthma, bronchitis, arthritis, falls, cataract and depression. Frail individuals had a worse cardio-metabolic profile with increased risk of dyslipidemia, increased heart rate, poor lung function (FEV₁), raised white cell count, poor renal function (high creatinine, low estimated glomerular filtration rate), low alanine transaminase (ALT), and low serum sodium; some risk factors were also associated with being pre-frail. These associations remained in men without CVD.

Conclusions: A range of social and cardiometabolic risk factors were associated with frailty, which highlights the burden of metabolic abnormalities in frail elderly individuals. Characterising and managing the social and metabolic profile is important to manage the high risk of cardiovascular disease in frail elderly individuals.