Frailty, sarcopenia and inactivity – associations with mortality, complications and mobilization after a fall injury

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Background/Aim

If we can identify patients at risk of adverse outcomes, care and rehabilitation can be better planned. We aimed to explore the association of frailty, activity and sarcopenia with mortality, medical complications, and mobilization in elderly with fall injuries.

Methods

Patients ≥65 years admitted due to a fall were prospectively included. Assessment with Clinical Frailty Scale (CFS) grouped participants into non-frail (CFS 1-4) and frail (CFS 5-9), with Frändin-Grimby Activity Scale into physically inactive (score 1-2) and active (score 3-6). Measurement of handgrip strength divided patients into sarcopenic and non-sarcopenic. Outcomes were mortality and medical complications within 30-days, and mobilization (Cumulated Ambulation Score) on day 4.

Results

The cohort comprised 826 patients, 587 had CFS and 335 (57%) were frail. Of 481 with handgrip strength, 259 (54%) were sarcopenic. 333 (57%) of 589 with activity assessment were categorized as inactive. Both frailty and sarcopenia were associated with mortality, complications, and mobilization. Frailty was the strongest predictor of mobilization (OR 0.16; 95% CI 0.08-0.31), and sarcopenia of mortality (OR 9.80; 1.26-76.54). Inactivity was associated with complications and mobilization, and the strongest predictor of medical complications (OR 1.75; 1.25-2.43). The associations weakened when we adjusted for comorbidities. In a fully adjusted model, frailty and sarcopenia remained associated with unsuccessful mobilization.

Conclusion

Frailty, sarcopenia, and activity predicted adverse health outcomes in elderly following fall injury. Utilizing validated and easy-to-use tools to evaluate the patients' capacity might guide decisions on further treatment and rehabilitation.