

Validating a Standardised Approach in Administration of the Clinical Frailty Scale in Hospitalised Older Adults

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Abstract

Introduction: We developed a Clinical Frailty Scale algorithm (CFS-A) to minimise inter-rater variability and to facilitate wider application across clinical settings. We compared the agreement, diagnostic performance and predictive utility of CFS-A against standard CFS. **Materials and Methods:** We retrospectively analysed data of 210 hospitalised older adults (mean age, 89.4 years). Two independent raters assessed frailty using CFS-A. Agreement between CFS-A raters and with previously completed CFS was determined using Cohen's Kappa. Area under receiver operator characteristic curves (AUC) for both measures were compared against the Frailty Index (FI). Independent associations between these measures and adverse outcomes were examined using logistic regression. **Results:** Frailty prevalence were 81% in CFS and 96% in CFS-A. Inter-rater agreement between CFS-A raters was excellent (kappa 0.90, $P < 0.001$) and there was moderate agreement between CFS-A and standard CFS (kappa 0.42, $P < 0.001$). We found no difference in AUC against FI between CFS (0.91; 95% CI, 0.86-0.95) and CFS-A (0.89; 95% CI, 0.84-0.95; $P < 0.001$). Both CFS (OR, 3.59; 95% CI, 2.28-5.67; $P < 0.001$) and CFS-A (OR, 4.31; 95% CI, 2.41-7.69; $P < 0.001$) were good predictors of mortality at 12 months. Similarly, CFS (OR, 2.59; 95% CI, 1.81-3.69; $P < 0.001$) and CFS-A (OR, 3.58; 95% CI, 2.13-6.02; $P < 0.001$) were also good predictors of institutionalisation and/or mortality after adjusting for age, sex and illness severity. **Conclusion:** Our study corroborated the results on inter-rater reliability, diagnostic performance and predictive validity of CFS-A which has the potential for consistent and efficient administration of CFS in acute care settings.

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