

Evaluating the Correlation Between Dementia Assessment Sheet for Community-based Integrated Care System 21 scores and Criteria for determination of the daily life independence level of the elderly with dementia on Diagnosis Procedure Combination Data base

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Aim

This study aimed to evaluate the validity of the Criteria for determination of the daily life independence level of the elderly with dementia (CDED) in Diagnosis Procedure Combination (DPC) data compared to the Dementia Assessment Sheet for Community-based Integrated Care System (DASC-21), enhancing the use of CDED in DPC to clinical and policy research on dementia patients.

Methods

We conducted a validation study using DPC data and medical records from patients aged 65 and over at Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology. To confirm validity of CDED in DPC, DASC-21 was used as reference standard. The CDED scale in DPC data has five levels indicating dementia severity. We examined the association between CDED and DASC-21 using descriptive statistics and a generalized linear model with a Gaussian link function with and without other variables.

Results

Data from 9,401 patients were analyzed. Higher CDED scores correlated with older age, higher Charlson Comorbidity Index (CCI), lower Activities of Daily Living (ADL) scores, and higher frailty risk. The mean DASC-21 score increased with higher CDED levels, indicating worsening cognitive and functional status. The DASC-21 which modeled by GLM increase significantly with higher CDED (Level 1: HR = 1.33 (95% CI: 1.29–1.38), $P < 0.001$; Level 2: HR = 1.73 (95% CI: 1.67–1.79), $P < 0.001$; Level 3: HR = 2.15 (95% CI: 2.09–2.22), $P < 0.001$; Level 4: HR = 2.54 (95% CI: 2.41–2.68), $P < 0.001$; and Level M: HR = 2.24 (95% CI: 2.12–2.37), $P < 0.001$)

Conclusions and Implications

The CDED in DPC data reliably evaluates dementia severity, strongly associated with DASC-21 scores and reflecting dementia progression. The CDED is useful for patient assessment and policy development, supporting comprehensive dementia management.