Implementation of person-centered care

The anticholinergic effect on cognition (AEC) scale: Associations with mortality, hospitalisation and cognitive decline following dementia diagnosis

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Abstract

Objectives: To investigate associations between central anticholinergic burden (using the AEC scale), and mortality, hospitalisation and cognitive decline in patients with dementia.

Methods: The South London and Maudsley NHS Foundation Trust (SLaM) Clinical Records Interactive Search (CRIS) application was used to identify patients 65 years or older at their first recorded diagnosis of dementia. Data were linked to national mortality and hospitalisation sources, and serially recorded Mini-Mental State Examination (MMSE) scores were used to investigate cognitive decline over the 36 months after diagnosis in mixed models.

Results: Patients for whom a review of their medication was indicated (AEC score ≥ 2 for any individual drug or total AEC score ≥ 3) had an increased risk of mortality (hazard ratio 1.07; 95% CI 1.01-1.15) and emergency hospitalisation (1.10; 95% CI 1.04-1.17), but there were no associations with duration of hospitalisation. Cognitive trajectory analyses showed that this exposure group had lower MMSE scores at diagnosis and a sharper increase in MMSE scores over the subsequent 6 months, but similar slopes for the 6-36 months period to the remainder of the sample.

Conclusions: Patients with dementia receiving medication with high central anticholinergic activity (as measured on the AEC scale), appear to have worse prognosis in terms of mortality and hospitalisation risk, but have primarily acutely impaired cognitive function, rather than longer term differences in cognitive decline.