Alzheimer's Disease and Use of Acute Care Services

Leibson C, Owens T, O'Brien P, Waring S, Tangalos E, Hanson V, et al. Use of physician and acute care services by persons with and without Alzheimer's disease: a population-based comparison. J Am Geriatr Soc 1999;47:864–9.

Study Overview

Objective. To assess whether persons with Alzheimer's disease (AD) use more or fewer acute care services than unaffected persons.

Design. Retrospective, population-based cohort study using medical record review.

Setting and participants. All Rochester, Minnesota, residents aged 65 years and older who had AD onset between 1980 and the end of 1984 (n = 301). For each AD case, 1 age- and sex-matched nondemented control was identified in a retrospective review of community-based medical records made available through the Rochester Epidemiology Project [1].

Main outcome measures. Use of acute care services, including number of clinician visits (office or nursing home), emergency room (ER) visits, hospitalizations (inpatient and outpatient), and inpatient days. Outcomes for AD cases and their matched controls were tracked for 1 year before 1 January of the index year (ie, year of AD onset) and for 4 years following 31 December of the index year. Multivariate regression and analyses were adjusted for age, sex, pre-index level of illness, and length of follow-up.

Main results. In the pre-index period, the level of illness (measured by Charlson score [2]) and number of office visits, ER visits, and hospitalizations were similar in AD patients and controls, although 7% of AD patients were visited by a clinician in the nursing home, while none of the controls were. In the post-index period (mean length of time, 3.4 years), the number of ER visits, hospitalizations, and inpatient days were similar between AD patients and controls. However, 64% of AD patients had a clinician visit in a nursing home versus 1% of controls. When clinician nursing home visits were combined with office visits, AD patients still had roughly 50% more visits than controls (median of 29 for AD patients and 16 for controls [rank sum $P < 0.001$]).

Conclusion

The onset of AD was not associated with substantially greater use of acute care services overall. However, the increased use of nursing home care by AD patients was not offset by fewer acute ER or hospital encounters.

Commentary

Studies have shown that AD leads to increased use of long-term care services [3,4], but the disease's impact on use of acute care services is less well understood. Previous studies have produced conflicting results and typically were limited by the inclusion of nonrepresentative cohorts or the exclusion of patients who resided or received care in nursing homes. This population-based study is a step forward because it attempts to assess acute care utilization in a broad spectrum of AD patients, including those who reside in the community and in long-term care facilities.

Leibson and colleagues used data from the 1980s; since then, the delivery and financing of health care services has changed substantially, especially for AD patients. However, their work is useful because it supports the view that medical care provided in long-term care settings is the primary component of health care services utilization attributable to AD and the chief driver of concomitant costs. This study should be replicated with more current and geographically diverse data to determine whether the setting or amount of care provided has changed in the past decade and if so, how.

Applications for Clinical Practice

This study shows that use of acute care services varies little between those with and without AD. Further studies are needed to assess the quality of care being provided to residents of long-term care facilities and whether it is equivalent to the care provided to community resi-dents.

References

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(continued on page 15)

(continued from page 12)

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4. Rice DP, Fox PJ, Max W, Webber PA, Lindeman DA, Hauck WW, Segura E. The economic burden of Alzheimer's disease care. Health Aff (Millwood) 1993;12:164–76.