Hospital-acquired delirium in older adults

Nathan Stall MD, Camilla L. Wong MD MHSc

Delirium is a commonly acquired neuropsychiatric syndrome among older adults in hospital

The Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5) classifies delirium as a syndrome of disturbed attention and awareness that has an acute onset, fluctuating course and is associated with an additional disturbance in cognition. Delirium may be hypoactive (lethargy and reduced psychomotor functioning), hyperactive (agitation and hallucinations) or mixed. The incidence of hospital-acquired delirium among older adults is 14%–56%, with higher rates in postoperative and intensive care settings.

Delirium is underdiagnosed; the use of validated bedside instruments may improve detection

Although the new DSM-5 criteria for delirium have not been studied, the criteria in the previous version (DSM-IV) were subjective, resulting in nondetection rates of 32%–67%. Bedside instruments may improve identification, with the best evidence supporting the Confusion Assessment Method (CAM). This tool (available at www.hospitalelderlifeprogram.org) takes 5 minutes to administer. It identifies 4 features of delirium: acute onset and fluctuating course (feature 1), inattention (2), disorganized thinking (3) and altered level of consciousness (4). The diagnosis of delirium using CAM requires the presence of features 1 and 2 and either 3 or 4. This tool has a sensitivity of 94%–100%, specificity of 90%–95%, positive likelihood ratio of 9.6 (95% confidence interval [CI] 5.8–16.0) and a negative likelihood ratio of 0.16 (95% CI 0.09–0.29) for diagnosing delirium.

Management involves addressing the underlying cause

The underlying cause should be addressed. Nonpharmacologic treatments involve reorientation, vision and hearing optimization and creating a supportive environment that minimizes noise and staff and room changes. Antipsychotic medication should be reserved for patients at risk of harm or interruption of essential therapy. Haloperidol, risperidone and olanzapine have equal efficacy.

Prevention is critical because delirium is an independent determinant of hospital outcomes

About 30%–40% of cases of delirium are preventable. Randomized trials show that interventions addressing multiple risk factors (cognition, mobility, vision, hearing, electrolyte and volume status, sleep, pain and medications) can prevent delirium. A well-known example is the Hospital Elder Life Program, which includes an interdisciplinary team and trained volunteers to target these risk factors. Delirium increases hospital length of stay, mortality and admission to a long-term care facility, and it may have long-lasting effects on cognition.

The causes of delirium are multifactorial and often iatrogenic

Common causes include medications, infections, hypoxia, and fluid, electrolyte and metabolic disturbances (Appendix 1, available at www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.130299/-/DC1). Hospital-acquired delirium is often iatrogenic, and independent precipitants include the use of physical restraints, malnutrition, more than 3 new medications and bladder catheterization.

For references, please see Appendix 2, available at www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.130299/-/DC1

Competing interests: Camilla Wong holds grant funding from the Ministry of Health and Long-Term Care’s Alternate Funding Plan Innovation Fund to evaluate a model of care on delirium among elderly trauma patients and has received payment from the American Colleges of Surgeons for lectures on topics including delirium in elderly trauma patients. Nathan Stall is a freelance newswriter and member of the editorial advisory board for CMAJ.

This article has been peer reviewed.

© 2014 Canadian Medical Association or its licensors

CMAJ invites submissions to “Five things to know about ...” Submit manuscripts online at http://mc.manuscriptcentral.com/cmaj

Affiliations: Department of Medicine (Stall and Wong), University of Toronto; Keenan Research Centre in Li Ka Shing Knowledge Institute, St. Michael’s Hospital (Wong); Division of Geriatric Medicine (Wong), St. Michael’s Hospital, Toronto, Ont.

Correspondence to: Nathan Stall, nathan.stall@mail.utoronto.ca

CMAJ 2014. DOI:10.1503/cmaj.130299