

Identifying Older Adults at Risk of Delirium Following Elective Surgery: A Systematic Review and Meta-Analysis

Summary

Delirium (i.e. acute confusion) is one of the most common complications of surgery among older adults and has been associated with prolonged hospitalization, death, and admission to long-term care. Identifying patients at risk of delirium is important to help clinicians mitigate this risk in practice. This review aimed to identify preoperative patient characteristics of older adults undergoing elective surgery that either predispose or protect them from developing postoperative delirium.

Implications

The protective and modifiable prognostic factors identified in this review, including smoking, frailty, and psychotropic medication use, should be further studied to develop interventions aimed at mitigating their effect. Additionally, the estimated incidence of postoperative delirium and risk of delirium-related adverse outcomes can be used by clinicians and patients to enhance decision-making and by researchers to study possible interventions aimed at lessening the impact of postoperative delirium on older adults undergoing elective surgery.

Reference:

Watt J, Tricco AC, Talbot-Hamon C, et al. Identifying Older Adults at Risk of Delirium Following Elective Surgery: A Systematic Review and Meta-Analysis. *J Gen Intern Med.* 2018 Jan 26;doi: 10.1007/s11606-017-4204-x.

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What is the current situation?

- Postoperative delirium is one of the most common complications of surgery among older adults.
- To enhance medical decision-making, there is a need to identify patients at risk of postoperative delirium.

What is the objective?

- To identify preoperative patient characteristics of older adults undergoing elective surgery that either predisposes or protects them from developing postoperative delirium.

How was the review conducted?

- Medline, EMBASE, CINAHL, Cochrane Central Register of Controlled Trials, and AgeLine were searched from inception until April 21, 2016. Reference lists of included studies and authors' personal files were scanned to supplement the search.
- Prospective studies (e.g., randomized controlled trials, non-randomized controlled trials, and prospective cohort studies) were eligible if they included older adults undergoing elective surgery (all patients ≥ 60 years old and mean age of patients enrolled in the study ≥ 65 years old) and reported prognostic factors associated with postoperative delirium or delirium-related adverse outcomes. Only studies published in English were included.
- Independent pairs of reviewers performed study selection, data abstraction, and quality assessment. Discrepancies were resolved by discussion or a third reviewer was involved.
- Random effects meta-analysis models were used to derive pooled effect estimates.

What did the review find?

- Postoperative delirium occurs frequently in the setting of elective surgery among older adults, and is associated with adverse outcomes that can severely impact both the quality of life and mortality.
- Prognostic factors identified include common geriatric syndromes such as cognitive and functional impairment; potentially modifiable factors such as smoking status, frailty, and use of psychotropic medications; and protective factors such as caregiver support.
- Previous research has found that interventions for preoperative smoking cessation are associated with a lower risk of postoperative complications and direct patient education is effective at reducing benzodiazepine prescriptions. Multicomponent interventions aimed at improving nutrition, physical fitness, and cognition have shown promise in reversing frailty.
- Additionally this review found that having a caregiver available in the perioperative period is potentially protective against developing postoperative delirium.

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