

# Risk factors and incidence of postoperative delirium in elderly patients after elective and emergency surgery\*

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First published: 12 January 2010

<https://doi.org/10.1002/bjs.6843>

## Abstract

### Background:

This study evaluated the incidence of postoperative delirium (POD) in elderly patients undergoing general surgery, the risk factors associated with POD, and its impact on hospital stay and mortality.

### Methods:

Patients aged over 65 years who had emergency or elective operations were eligible for this case-control study. Risk factors significantly associated with POD using univariable analysis were entered into multivariable analysis, to establish those independently associated with POD.

### Results:

A total of 351 patients (357 admissions) were enrolled in the study. The incidence of POD was 13.2 per cent (17.9 per cent for emergency operations). Independent variables associated with POD were: age above 75 years, co-morbidity, preoperative cognitive impairment, psychopathological symptoms and abnormal glycaemic control. Median length of hospital stay was 21 (range 1–75) days for patients with POD *versus* 8 (range 1–79) days for control patients ( $P < 0.001$ ). The hospital mortality rate was 19 and 8.4 per cent respectively ( $P = 0.021$ ).

### Conclusion:

The incidence of POD is high in elderly patients for both emergency and elective surgery, leading to an increase in hospital stay and perioperative mortality. To minimize POD, associated risk factors of co-morbidity, cognitive impairment, psychopathology and abnormal glycaemic control must be identified and treated.