

Post-anaesthesia care unit (PACU) Delirium – Incidence and associated risk factors

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Introduction:

Post-anaesthesia care unit (PACU) delirium is a potentially preventable condition that results in a significant long-term effect. In a multicenter prospective cohort study, we investigate the incidence and risk factors of postoperative delirium in elderly patients undergoing major non-cardiac surgery.

Methods:

Patients were consented and recruited from four major hospitals in Singapore. Research ethics approval was obtained (DSRB2019/00703). Patients older than 65 years undergoing noncardiac surgery >2 hours were recruited. Baseline perioperative data were collected. Preoperative baseline cognition was obtained. Patients were assessed in the post-anaesthesia care unit for delirium 30-60 minutes after arrival using the Nursing Delirium Screening Scale (NuDESC).

Results:

Ninety-eight patients completed the study. Eleven patients (11.2%) had postoperative delirium. Patients who had PACU delirium were older (74.6 ± 3.2 vs 70.6 ± 4.4 , $p=0.005$). Univariate analysis showed those who had PACU delirium are more likely to be ASA 3 (63.6% vs 31.0%, $p=0.019$), had eGFR of <60 mL/min/1.73m² (36.4% vs 10.6%, $p=0.013$), higher HbA1C value (7.8 ± 1.2 vs 6.6 ± 0.9 , $p=0.011$), raised random blood glucose (10.0 ± 5.0 mmol/L vs 6.5 ± 2.4 mmol/L, $p=0.0066$), and moderate-severe depression (18.2% vs 1.1%, $p=0.033$). They are more likely to stay longer in hospital (median 8 days (4-18) vs 4 days (2-8), $p=0.049$). Raised random blood glucose is independently associated with increased PACU delirium on multivariate analysis ($p<0.05$).

Conclusion:

PACU delirium is common in elderly patients who have multiple comorbidities. Patients who are ASA 3 and 4, have renal impairment, higher HbA1c, random blood glucose and moderate to severe depression are more vulnerable. These patients utilize more healthcare resources.