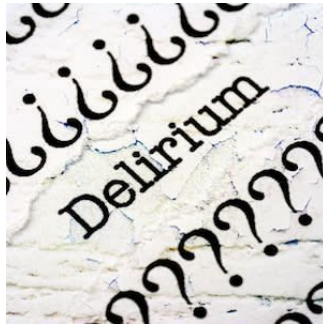


Perioperative Dexmedetomidine and Postoperative Delirium



Delirium is very common in patients who undergo major cardiac and non-cardiac surgery. Delirium is associated with postoperative mortality, postoperative cognitive dysfunction, increased length of stay in the hospital and postoperative complications and morbidity.

A study was conducted to investigate the effect of perioperative administration of dexmedetomidine on the incidence of postoperative delirium in non-cardiac and cardiac surgical patients. Dexmedetomidine is an α_2 -agonist and is widely used in critical care for delirium symptom control. It has sparing properties on delirogenic medication such as sedatives and opioids and has anti sympathetic, co-analgesic, anxiolytic and sedative effects. The study was conducted at the Department of Anaesthesia and Intensive Care Medicine, Charité – Universitätsmedizin Berlin.

Sixty-three patients were included in the study undergoing major open abdominal surgery or coronary artery bypass graft surgery with cardiopulmonary bypass. All patients received general anaesthesia and postoperative analgesia. Propofol was used for induction of anaesthesia. Some patients were premeditated with midazolam. Dosing was calculated according to adjusted body weight. Patients received either a fixed rate of dexmedetomidine $0.7 \mu\text{g.kg}^{-1}.\text{h}^{-1}$ or an equivalent volume of saline, starting 10 min after induction of anaesthesia.

The primary outcome of the study was the incidence of postoperative delirium. Delirium assessment was performed twice daily till day five of the postoperative period, at the time of discharge or until day 14 of the postoperative period.

Findings of the study show dexmedetomidine was associated with a reduced incidence of postoperative delirium within the first five postoperative days. The severity of the delirium was comparable in both groups. There were no deaths in the dexmedetomidine group, while five patients died in the placebo group.

Overall, these findings show that the perioperative administration of dexmedetomidine is associated with a lower incidence of postoperative delirium.

Source: [Anaesthesia](#)

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