

Regulation of preoperative delirium and postoperative delirium

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EDITORIAL NOTE

Maniar and colleagues investigated whether the POD could predict mortality and morbidity in a retrospective sample. When compared to patients without POD, they discovered that POD was associated with a longer Intensive Care Unit (ICU) stay (27 h), ICU readmission, and rises in mortality at 30 days and 1 year. While POD had no effect on 1-year mortality when comparing aortic valve replacement approaches, Surgical Aortic Valve Replacement (SAVR) patients had POD more frequently than TAVI patients. POD also predicts first-time readmissions and 180-day mortality in octogenarian patients who have undergone SAVR or TAVI therapy, according to a prospective report. Scholz et al. found that POD significantly increased the length of hospital stay and resulted in a higher mortality rate in a systematic review and meta-analysis of 11 studies. Another recent prospective study found that POD is linked to a sevenfold rise in 5-year mortality and a longer ICU stay in patients over 50 who are having elective surgery.

POD can be triggered by neuroinflammation in the central nervous system, which is caused by surgery-induced systemic inflammation, according to recent animal studies. Vacas and colleagues discovered that High-Mobility Group Box 1 protein (HMGB1) caused memory loss in adult mice, and that neutralising anti-HMGB1 antibody could minimise memory loss after surgery. Several clinical studies found a connection between intraoperative hypotension and POD in spinal surgery and badly burned patients undergoing early escharotomy, although others found no link between intraoperative hypotension and POD. It was found to be significantly correlated with intraoperative blood pressure fluctuations, but not total or relative hypotension, according to Hirsch and colleagues. These findings could point to a connection between POD and changes in cerebral perfusion or oxygen supply.

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Keywords

Aortic valve; Anesthesiologists; Octogenarian patients; Respiratory systems

Depth of anesthesia

According to a previous study, anaesthesia decreased the risk of POD since extremely low BIS values can trigger POD. Depth monitoring can minimise anaesthetic exposure, resulting in a faster neurological recovery and, as a result, a lower POD. Monitoring-guided anaesthesia, according to a new systematic study, decreased the likelihood of POD long-term cognitive dysfunction. However, the majority of recent Randomised Clinical Trials (RCTs) have cast doubt on the efficacy of POD surveillance. These RCTs found that anaesthesia driven by depth of anaesthesia monitoring did not reduce the risk of POD in elderly patients undergoing major surgery. To avoid POD, prehabilitation services are highly recommended in these populations. Several clinical trials investigating the protective effects of multimodal prehabilitation services are currently underway. Neurological disorders such as stroke, Parkinson's disease, and cognitive dysfunction, as well as impaired cardiac and/or pulmonary function, lumbago, coxalgia, and gonalgia, cause this inability. Recent studies have shown the effectiveness of Virtual Reality Therapy (VRT). POD has recently been linked to an increased risk of morbidity and mortality following surgery. The importance of prehabilitation in the prevention of POD cannot be overstated. However, since elderly patients are often vulnerable with multiple comorbidities and have difficulty engaging in "normal" prehabilitation services, VR-prehabilitation may be a promising method for preventing POD. Clinical trials with VR-neurorehabilitation for the prevention of POD in elderly patients are needed, providing an appealing prospect for these vulnerable patients.

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