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Ambulatory Abstracts

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Intravenous *versus* oral sedation for cataract surgery: a systematic review and meta-analysis

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INTRODUCTION

Cataract surgery is a safe and routinely performed surgery. Sedation practices vary, with centres providing either intravenous (IV), oral, or no sedation for surgery. The purpose of this review is to assess the effectiveness of intravenous sedation compared to non-intravenous sedation for routine cataract surgery.

METHODS

Medline, Embase, Cochrane Library, BIOSIS, Web of Science, and CINAHL were searched from inception to July 2024 for relevant articles containing original data. Randomized controlled trials that compared IV to oral or no sedation and 1) used a validated pain scale to report on pain or 2) reported on perioperative complications were included. Risk of bias was assessed using the Cochrane's Risk of Bias Tool. A random effects meta-analysis was conducted and odds ratios, standard mean differences, 95% confidence intervals (CIs), and I² statistics were reported. The review was registered in PROSPERO and PRISMA guidelines were followed.

RESULTS

Twelve randomized controlled trials including 1,130 patients were included in the meta-analysis. Intravenous sedation was associated with significantly decreased pain compared to no sedation (SMD, -0.98; 95% CI, -1.68 to -0.29). Comparing IV and oral sedation, however, there was no difference in patient reported pain (SMD, -0.54; 95% CI, -1.60 to 0.52). Analysis of intraoperative complications showed that there was no significant difference in complications between patients receiving IV and oral sedation (OR, 0.68; 95% CI, 0.27 to 1.73).

DISCUSSION

For routine cataract surgery, the current evidence suggests that IV sedation is associated with less pain for patients than no sedation, but oral and IV sedation provide comparable pain control. Perioperative complications seem to occur at similar rates regardless of sedation modality. These findings may help to inform sedation practices for cataract surgery.

REFERENCES

No references.

Streamlining perioperative care: evaluating the impact of a direct to phase II protocol on hip and knee arthroplasty outcomes and hospital efficiency

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INTRODUCTION

The surgical department at a major metropolitan hospital oversees a diverse population, including two-thirds undergoing same-day discharge orthopedic surgery. To address postoperative care and improve inefficiencies, a Direct to Phase II protocol was implemented in 2022 for specific patient groups. This protocol aimed to streamline transitions from the operating room to Phase II recovery, bypassing the postanesthesia care unit (PACU). Despite these efforts, the PACU faced significant bottlenecks due to limited bed availability and high patient turnover, causing transition delays resulting in increased operational costs. Evidence of programs that were designed to streamline care and meet Phase I recovery criteria without a PACU stay have shown to be successful.¹ This quality improvement project aimed to increase the impact of the protocol on perioperative efficiency and patient outcomes for patients undergoing hip and knee arthroplasty surgery receiving spinal anesthesia.

METHODS

Inclusion criteria for the Direct to Phase II protocol comprised of adequate home support, well-controlled comorbidities, preoperative American Society of Anesthesiologists Physical Status score less than IV, absence of surgical complications, and successful spinal and regional anesthesia. Eligible patients were transferred directly from the operating room to Phase II, after meeting Whites' criteria.² Data collection focused on patient throughput, average length of stay, postoperative complications, and 30-day readmission rates. A Plan-Do-Act-Study framework was used to iteratively address barriers and refine protocol. Data from 1 June to 1 November 2024 was analyzed to evaluate the protocol's effectiveness.

RESULTS

Between 1 June to 1 November 2024, 229 patients undergoing unilateral and bilateral, primary and revision hip and knee arthroplasty were the population of interest. The Direct to Phase II protocol for hip and knee arthroplasty patients demonstrated significant improvements in perioperative efficiency and patient outcomes. Over the project timeline, 89.5% of patients were directly transferred from the operating room to Phase II and 90.8% of patients were discharged home from Phase II recovery, with a low 30-day readmission rate of 0.4%. The average postoperative length of stay was reduced by 7%, and the initiative resulted in approximately 45 fewer PACU admissions per month, effectively alleviating capacity constraints. Additionally, operating room holds decreased by 72%, further enhancing surgical flow. Challenges included managing postoperative pain and ensuring adequate range of motion, highlighting areas for further refinement.

DISCUSSION

The implementation of the Direct to Phase II protocol for this specific patient population significantly improved postoperative care efficiency and hospital operations. Engagement of the multidisciplinary stakeholders throughout was crucial for success. Reduction in PACU admissions and optimizing patient flow, enhanced resource utilization. Despite these successes, addressing postoperative pain and mobility issues remain a priority. Future studies should validate these findings across broader populations and explore strategies to further optimize recovery pathways, ensuring sustainable improvements in surgical care.

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