CAS 2025

Regional and Acute Pain Abstracts

Contents

Impact of regional anesthesia and adjunct medications on postoperative pain and hospital length of stay following total knee arthroplasty

Submission ID

72

AUTHORS

Iyayi, Mudia;[1] Phelan, Rachel;[1,2] Hopman, Wilma;[3,4] Haley, Christopher;[1,2] Clinkard, David;[1,2] Cupido, Tracy[1,2]

[1]Faculty of Health Sciences, Queen's University, Kingston, ON, Canada; [2]Department of Anesthesiology and Perioperative Medicine, Queen's University, Kingston, ON, Canada; [3]Kingston General Health Research Institute (KGHRI), Kingston Health Sciences Centre, Kingston, ON, Canada; [4]Department of Public Health Sciences, Queen's University, Kingston, ON, Canada

INTRODUCTION

The surgical management of knee osteoarthritis involves total knee arthroplasty (TKA), a knee replacement procedure that can be associated with significant postoperative pain and associated functional limitations.[1] Regional anesthesia blocks (i.e., the adductor canal block [ACB]) are widely used by anesthesiologists to provide postoperative analgesia following TKA.[1] Regional anesthetic adjuncts such as dexamethasone and dexmedetomidine, have also emerged as important components of the regional block analgesic regimen.[2,3] However, sparse and inconsistent data exists on the perioperative use of regional anesthesia adjuncts in TKA and their impact on patient outcomes.[2,4] The primary objective of this study was to determine the impact of the ACB and associated adjuncts on postoperative opioid consumption and length of hospital stay following TKA. The secondary objective was to investigate current TKA anesthetic practice patterns at our site and provide data to inform changes in TKA analgesic protocols.

METHODS

Following institutional ethics board approval (#6041536), a single-centre retrospective chart review was conducted. Charts for patients who underwent TKA over a 4-month period (April to July) in both 2023 and 2024 were included. These dates were chosen to capture a change in practice at our institution with regional block utilization being significantly reduced. Patients who underwent bilateral TKA or those with complicated hospital admissions unrelated to the regional block or pain were excluded.

Patients were identified into 2 groups: those who received a single-shot ACB with ropivacaine (ACB group) and those that did not (No ACB). The ACB group was further subdivided by those who received a local adjunct (dexamethasone and/or dexmedetomidine) or not. All patients received an intraoperative periarticular local anesthetic injection by the surgeon. The primary outcome of the study was postoperative opioid consumption over 48 hr, expressed as

oral morphine milligram equivalents (MME). The secondary outcomes were length of hospital stay and the success of same-day discharge. Data were analyzed with Python (version 3.13.1) using Mann–Whitney *U* and Chi square tests as appropriate.

RESULTS

Of the 327 charts reviewed, 284 met inclusion criteria (Table). Opioid consumption did not differ with ACB usage (25.3 [12.0–55.1] *vs* 30.0 [14.0–67.0] MME; *P* = 0.207) or between the adjunct *vs* no adjunct groups (24.0 [11.9–53.6] *vs* 29.5 [14.5–68.5] MME; *P* = 0.504). However, patients receiving dual adjuncts (combination of dexamethasone and dexmedetomidine) required significantly less opioids than those receiving single adjuncts (20.0 [8.0–42.5] *vs* 37.0 [19.5–73.0] MME; *P* = 0.021).

Length of stay (LOS) was significantly reduced in the ACB group compared to the No ACB group (13.0 [5.0–28.0] *vs* 24.0 [7.0–44.0] hr; *P* = 0.015), with no differences in same-day discharge (49.7% *vs* 40.1%; *P* = 0.107). There was no difference in LOS with the adjunct *vs* no adjunct group (19.0 [6.0–27.0] *vs* 9.0 [5.5–32.0] hr; *P* = 0.871), but patients with combined adjuncts were more often discharged on the same day (79.4% *vs* 20.6%; *P* = 0.033).

DISCUSSION

Our study found that adductor canal block use reduced the length of stay in TKA patients, however, we did not find an additional reduction in opioid consumption or length of hospital stay with adjunct usage. Interestingly, our data suggests that ACBs with dual adjunct analgesics can reduce opioid consumption and increase same-day discharge following TKA, highlighting a potential synergistic or additive analgesic effect of dexamethasone and dexmedetomidine. This relationship should be further investigated with a larger sample size and any dose-related effects determined. The retrospective design and missing data due to irregularities in record keeping are study limitations.

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Table

	All groups (n=284)	ACB (n=147)	No ACB (n=137)	All adjunct (n=75)	Adjunct; combo (n=50)	Adjunct; solo (n=25)	No adjunct (n=72)
Age, mean (SD)	67.80 ± 8.89	66.69 ± 9.10	68.88 ± 8.50	68.13 ± 9.06	67.86 ± 8.31	68.68 ± 10.57	65.18 ± 8.96
Sex, n (%)							
Male	118 (41.5%)	57 (38.8%)	61 (44.5%)	26 (34.7%)	17 (34%)	9 (36%)	31 (43.1%)
Female	166 (58.5%)	90 (61.2%)	76 (55.5%)	49 (65.3%)	33 (66%)	16 (64%)	41 (56.9%)
Weight in kg, mean (SD)	94.8 ± 22.14	94.35 ± 21.71	95.27 ± 22.67	90.72 ± 21.33	88.72 ± 20.73	94.72 ± 22.36	98.13 ± 21.60
BMI in kg/m², mean (SD)	34.08 ± 8.64	33.83 ± 8.45	34.39 ± 8.88	32.75 ± 9.86	31.87 ± 7.62	34.44 ± 13.18	34.94 ± 6.59
Anesthesia, n (%)							
General	82 (28.9%)	33 (22.4%)	49 (35.8%)	14 (18.7%)	8 (16%)	6 (24%)	19 (26.4%)
Spinal block	202 (71.1%)	114 (77.6%)	88 (64.2%)	61 (81.3%)	42 (84%)	19 (76%)	53 (73.6%)
Regional block (ACB)	147 (51.8%)	147 (100%)	0 (0%)	75 (100%)	50 (100%)	25 (100%)	72 (100%)

Percutaneous cryoneurolysis of intercostal nerves for analgesia in traumatic rib fractures and rib excision: a case report

Submission ID

131

AUTHORS

Liang, Jiachen;[1] Jew, Michael[2]

[1]Department of Anaesthesiology, Pharmacology, & Therapeutics, The University of British Columbia, Vancouver, BC, Canada; [2]Department of Anesthesiology, St. Paul's Hospital, Vancouver, BC, Canada

INTRODUCTION

Regional anesthesia plays a major role in the multimodal analgesia management of rib fractures, with the goal of decreasing pulmonary complications and promoting lung hygiene. Although highly effective, the duration of analgesia from conventional single shot blocks and perineural/neuraxial catheter techniques often fall short of the pain trajectory expected for secondary healing of rib fractures.

Historically, cryoneurolysis has been used in chronic interventional pain, but has seen a resurgence in interest for treatment of acute pain.[1–3] Cryoneuolysis uses cold temperatures to induce *reversible* nerve injury, preventing transmission of nociceptive signals for weeks to months. We present a successful case of cryoneurolysis used on a co-morbid patient with severe rib fractures and subsequent operative rib excision, helping him regain lung function rapidly and reduce opioid requirements perioperatively.

CASE PRESENTATION

A 74 yr old male suffered a fall, resulting in right sided T5–T10 lateral rib fractures with mild rib displacement. His past medical history is significant for moderate chronic obstructive pulmonary disease, untreated obstructive sleep apnea, morbid obesity, and active smoking.

The patient was admitted to the intensive care unit with high flow oxygen for respiratory monitoring. A T7–T8 thoracic epidural catheter was placed with analgesic effect, but pain still limited his breathing and he required oxygen on admission days 0–6. Bedside, ultrasound-guided percutaneous cryoneurolysis of the right T5–T10 intercostal nerves was performed after the epidural catheter removal.

Before cryoneurolysis, his pain was rated at 8/10 and he was unable to take deep breaths. Immediately after the procedure, he reported minimal discomfort from his chest and could generate a strong cough and mobilize sputum. His oxygen was quickly weaned and he was discharged after rehabilitation with no opioids needed.

Unfortunately, this patient returned to hospital one week after discharge for further displacement of the previous fractures and a loculated hemothorax. He underwent a video-assisted thoracoscopic surgery hemothorax evacuation, partial rib 8 resection, and right lower

lobe wedge resection with minimal analgesics under general anesthesia. He had an opioid-free postoperative course and was able to perform deep inspiration without issue. He was discharged home and remained pain-free until the complete resolution of his fractures.

CONCLUSION

We present a successful case of percutaneous cryoneurolysis of intercostal nerves for the treatment of pain in severe traumatic rib fractures and coincidental thoracic surgery. In this instance, cryoneurolysis alleviated pain, improved pulmonary function, expedited rehabilitation, and reduced post-operative opioid requirements. This case highlights the potential for cryoneurolysis of intercostal nerves as a promising analgesic and therapeutic option for chest wall trauma.

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Pneumothorax rates following cardiac surgery with and without serratus anterior plane blocks: a retrospective cohort study

Submission ID

104

AUTHORS

Saeed, Huzaifa;[1] Kang, Stella;[2] Uppal, Vishal;[2] Ho, Liem;[2] Bailey, Jonathan G.[2]

[1]College of Medicine, University of Saskatchewan, Saskatoon, SK, Canada; [2]Department of Anesthesia, Pain Management & Perioperative Medicine, Dalhousie University, Halifax, NS, Canada

INTRODUCTION

Moderate to severe pain is a common challenge after cardiac surgery, with the worst pain occurring during the first two postoperative days. Pain originates from sternotomy, chest tubes, rib fractures, and vein harvesting. Ineffective pain management prolongs intensive care unit (ICU) stays, increases health care costs, and often leads to chronic pain.[1] Enhanced recovery after surgery (ERAS) protocols prioritize multimodal analgesia and reduced opioid reliance, with regional anesthesia techniques playing a key role.[2] Serratus anterior plane blocks (SAPB) offer effective pain control in thoracic surgery and were being investigated for effectiveness in sternotomy patients. Patients in a randomized trial had higher than expected rates of pneumothoraxes. However, cardiac surgery patients may have a higher pneumothorax risk due to pleural disruption, barotrauma, and chronic obstructive pulmonary disease (COPD).[3]

This study evaluates pneumothorax rates and respiratory complications in cardiac surgery patients receiving SAPB compared to standard analgesia, aiming to assess its safety and feasibility.

METHODS

We conducted a retrospective cohort study comparing patients from the Cardiac-SAP randomized controlled trial (*N* = 50, 2021–2023) with a historical control cohort (*N* = 1,498, 2017–2020) at our institution. Both cohorts included adults (> 18 yr) undergoing valvular replacement/repair and/or coronary artery bypass grafting via median sternotomy. Exclusion criteria included emergency surgeries (< 2 hr), ejection fraction < 30%, extracorporeal membrane oxygenation, intra-aortic balloon pump, preoperative vasopressors or inotropes, severe liver disease, severe kidney disease, or planned circulatory arrest. Pneumothorax was defined as clinically relevant, requiring chest tube insertion. Secondary outcomes including ICU readmissions, ventilation duration, and hospital length of stay. Trial patients were matched to controls using propensity score matching (1:20) to balance variables such as age, sex, smoking status, surgery type, and COPD, with a caliper of 0.2. Univariate analyses used Chi square and Fisher exact tests for dichotomous outcomes. Continuous medians were compared using the percentile bootstrapping method with 2,000 repetitions. A prior study reported a 1.5%

pneumothorax rate in cardiac surgery patients. With alpha 5% and power 80%, 817 patients were needed to detect a 1% increase.

RESULTS

The 50 patients in the Cardiac SAP trial were matched to 1,050 patients from a historic control. The pneumothorax rate was significantly higher in the SAPB cohort compared to the historical control group (12% *vs* 2.5%; OR, 5.3; 95% confidence interval, 2.1 to 13.6; $P < 0.001$). Intensive care unit readmissions and ventilation requirements were comparable. Notably, SAPB patients had shorter ventilation durations (18.1 *vs* 35.5 hr; $P = 0.03$) and hospital stays (9.4 *vs* 9.7 days; $P = 0.03$). There were no significant differences in the overall rate of chest tube placement, cardiovascular intensive care unit (CVICU) readmissions, or ventilation on readmission. There was also no difference in the length of ventilation, CVICU stay, or hospital stay.

DISCUSSION

We found that matched patients receiving SAP catheter in the Cardiac-SAP pilot study had higher rates of pneumothoraxes compared to historic controls. While there are several reasons for pneumothorax following cardiac surgery, this raises safety concerns around SAP catheters. We cannot be sure of the etiology of the pneumothoraxes and there were potential differences in the monitoring inside the trial compared to usual practices. Uncertainty about procedural complication rates is a drawback of double blinded trials. Heightened vigilance and maintaining careful needle visualization during chest wall blocks is recommended.

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Table Comparisons of patients in the Cardiac-SAP trial compared to historic controls (with and without SAP catheters) after matching

Outcome	SAP catheters *N* = 50	No catheters *N* = 989	*Adjusted* Odds Ratio*	*P value*
Pneumothorax, *n* (%)	6 (12%)	25 (2.5%)	5.3 (2.1- 13.6)	**<0.001**
Chest tube placed, *n* (%)	7 (14%)	82 (8%)	1.8 (0.8- 4.1)	0.160
CVICU readmission, *n* (%)	0 (0%)	34 (3%)	0.3 (0.0- 4.6)	0.183
Ventilation required on readmission, *n* (%)	0 (0%)	11 (1%)	0.7 (0.0- 11.9)	0.404
			Difference in Medians	*P value*
Length of ventilation (hours), median (IQR)	12.0 (9 – 17.8)	10.0 (6 – 19)	-2 (0 to 4)	0.176
Length of CVICU stay (hours), median (IQR)	26.0 (23 – 72)	25.0 (22 – 65)	-1 (-23 to 2)	0.500
Length of hospital stay (days), median (IQR)	8.5 (6.25 – 11)	7.0 (6 – 11)	-1.5 (-3 to 0)	0.085

*Adjusted for age, sex, procedure, smoking status, and COPD

The application of inhaled methoxyflurane for the management of procedural-induced acute pain: a scoping review of randomized controlled trials

Submission ID

49

AUTHORS

Patel, Partha;[1] Sferrazza, Dominic;[2] Wong, Henry C. Y.;[3] Lee, Shing Fung;[4,5] Al-Khaifi, Muna;[6] Finkelstein, Joel;[7] Verma, Shivani;[8] Hilkowitz, Ava;[8] Dhillon, Ananya;[8] Chow, Edward;[9] Rivlin, Leon[10]

[1]Faculty of Medicine, University of Ottawa, Ottawa, ON, Canada; [2]Faculty of Health Sciences, Queen's University, Kingston, ON, Canada; [3]Department of Oncology, Princess Margaret Hospital, Kowloon West Cluster, Hong Kong, SAR, China; [4]Department of Radiation Oncology, National University Cancer Institute, Singapore; [5]Yong Loo Lin School of Medicine, National University of Singapore, Singapore; [6]Department of Family and Community Medicine, Odette Cancer Centre, Sunnybrook Health Sciences Centre, Temerty Faculty of Medicine, University of Toronto, Toronto, ON, Canada; [7]Department of Orthopaedics, Sunnybrook Health Sciences Centre, Toronto, ON, Canada; [8]Faculty of Health, University of Waterloo, Waterloo, ON, Canada; [9]Odette Cancer Centre, Sunnybrook Health Sciences Centre, Toronto, ON, Canada; [10]Department of Emergency Medicine, Humber River Health, Toronto, ON, Canada

INTRODUCTION

Approved for use in Canada in 2018, inhaled methoxyflurane (IMF) is a rapid-onset rapid-offset analgesic indicated for application in moderate to severe pain-inducing procedures and acute trauma pain relief. Across most countries, it has been primarily employed in ambulatory environments and for use in certain outpatient techniques (e.g., hysteroscopy) as an alternative to opioid analgesia and other commonly used sedatives.[1] Inhaled methoxyflurane offers a variety of advantages including a non-clinically significant vital sign impact, reduced risk for respiratory depression (secondary to opioid overdose), a lower toxicity profile, the capacity to be patient self-administered, and reductions in procedural times, healthcare system crowding, and expenditure.[1,2] This scoping review aims to evaluate the efficacy of patient controlled IMF in randomized control trials across diverse settings to determine the current scope of its use and considerations for future areas for implementation.

METHODS

We conducted a literature search of OVID Medline, Cochrane Central Register of Controlled Trials (CENTRAL), and Embase from database inception to January 2025. Eligibility criteria for inclusion involved: a randomized control trial (RCT) study design; the study investigated the comparison of IMF against a standard of care or control group; if the procedure or setting in which IMF was used was for acute pain or procedural-induced pain management; and, if the primary outcome investigated was pain (particularly noting for changes in periprocedural or

peri-IMF administration pain score). Exclusion criteria for studies included: non-RCT study design; abstract only publications; non-English publications; and if the primary outcome was not pain score or pain reduction. Using Covidence, two independent reviewers completed title/abstract screening, full-text screening, and data-extraction. Data extracted included the following: study characteristics, intervention/treatment, control/standard of care, and pain score.

RESULTS

We identified 202 works, from which 14 RCTs met criteria and were analyzed. These trials were published between 2013 and 2024, based primarily in Australia (36%) with 9 other countries having 1 trial each (7%). The mean sample size was 211 (range, 12–420). Inhaled methoxyflurane was primarily employed in the management of acute trauma pain (50%) and biopsy-induced pain (21%). For other procedures, IMF was investigated in a single study, including colonoscopy, hysteroscopy, genicular nerve block, portacath insertion/removal, and cold pressor tests (7% each). Moreover, in the majority of RCTs, IMF was utilized in the emergency department/ambulance (50%) compared to settings such as other hospital departments (43%) or outpatient clinics (7%). Generally, most studies (71%) indicated IMF as providing faster-onset and/or statistically significant analgesia compared to standard treatment (e.g., acetaminophen, tramadol, opioid) or placebo.

DISCUSSION

The results suggest that IMF can be applied in a variety of clinical contexts beyond use in emergency and ambulatory settings, providing a similar or more effective level of relief from moderate to severe pain. Additionally, a quicker time to analgesia alludes to a potential route for enhanced streamlined processes in hospital emergency departments. Further investigations to explore these opportunities should be considered.

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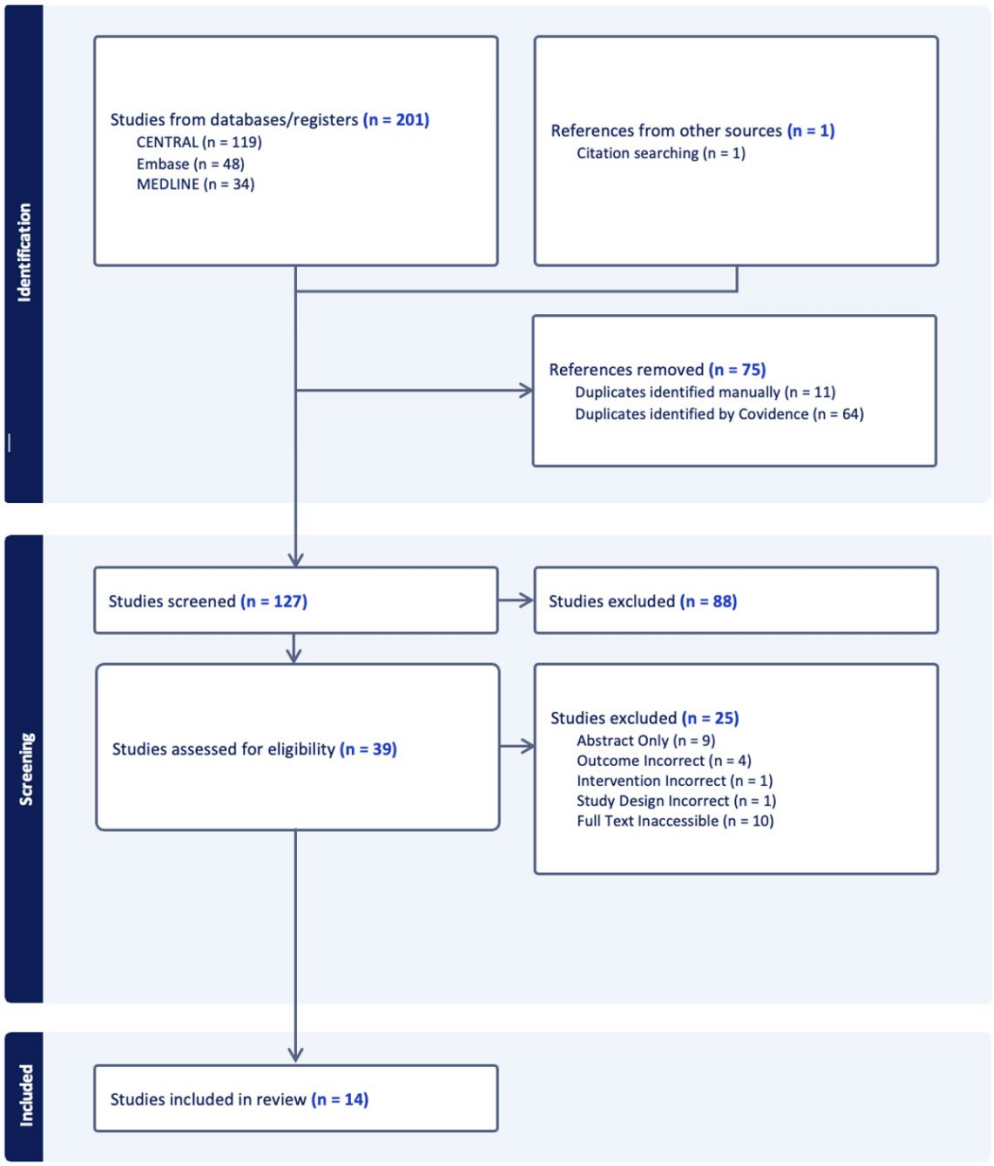
Figure


Identification
Studies from databases/registers (n = 201)
CENTRAL (n = 119)
Embase (n = 48)
MEDLINE (n = 34)
References from other sources (n = 1)
Citation searching (n = 1)
References removed (n = 75)
Duplicates identified manually (n = 11)
Duplicates identified by Covidence (n = 64)
Screening
Studies screened (n = 127)
Studies excluded (n = 88)
Studies assessed for eligibility (n = 39)
Studies excluded (n = 25)
Abstract Only (n = 9)
Outcome Incorrect (n = 4)
Intervention Incorrect (n = 1)
Study Design Incorrect (n = 1)
Full Text Inaccessible (n = 10)
Included
Studies included in review (n = 14)

Truncal nerve blocks *versus* intraperitoneal local anesthesia in bariatric surgery: a systematic review and meta-analysis

Submission ID

42

AUTHORS

Xiang, Alexander;[1] Chuang, Zachary;[2] Patil, Vivek;[1] Tang, Eileen;[3] Sadafi, Sarah Lopes;[4] Ladha, Karim S.[2]

[1]Department of Medicine, McMaster University, Hamilton, ON, Canada; [2]Department of Anesthesiology & Pain Medicine, University of Toronto, Toronto, ON, Canada; [3]Faculty of Medicine, University of Toronto, Toronto, ON, Canada; [4]Faculty of Health Sciences, McMaster University, Hamilton, ON, Canada

INTRODUCTION

Bariatric surgery has become a widely used treatment for patients with severe obesity, providing benefits such as improved glycemic control, a reduction in diabetic complications, and significant weight loss.[1] These patients present perioperative challenges, with an increased risk of respiratory depression, hypoxia, obstructive sleep apnea, and postoperative nausea and vomiting (PONV).[2] Current guidelines recommend multimodal analgesic techniques to reduce postoperative pain and opioid requirements; these techniques include truncal nerve blocks and intraperitoneal local anesthetics (IPLA).[3] Truncal nerve blocks include transverse abdominal plane (TAP), erector spinae plane, and quadratus lumborum blocks, while IPLA involves the instillation of local anesthetics into the peritoneal cavity through port sites.

Both techniques offer benefits in pain control and analgesic requirements compared to opioid-based analgesia, yet the comparative advantage of the two interventions remains inconclusive. This systematic review and meta-analysis examined the efficacy and safety of truncal nerve blocks compared to IPLA in patients undergoing laparoscopic bariatric procedures.

METHODS

We searched Medline, CENTRAL, EMBASE, CINAHL, and trial registries until 19 September 2024, using a librarian-approved Cochrane highly sensitive search strategy. Reference lists of eligible studies and relevant systematic reviews were also searched. We included randomized clinical trials (RCTs) enrolling over 15 participants that compared a truncal nerve block or IPLA to each other or opioid-based analgesia in patients undergoing laparoscopic bariatric procedures. Primary outcomes included postoperative pain up to 24 hr and opioid consumption. Secondary outcomes included rates of PONV, surgical complications, and hospital length of stay.

Continuous outcome data was pooled using mean differences (MD) and 95% confidence intervals, while dichotomous outcomes were pooled using Mantel–Haenszel odds ratios (OR). A random effects model was used for all outcomes, and heterogeneity was assessed using the I^2 statistic. Direct comparisons of truncal nerve blocks and IPLA were directly pooled. Indirect

comparisons between truncal nerve blocks or IPLA to an opioid-based analgesia protocol were pooled using the same method. The pooled outcome data was then compared using Bucher's method for indirect treatment comparisons in meta-analyses.[4] Risk of bias was completed using the Cochrane ROB 2.0 tool, and the certainty of evidence was assessed using the GRADE tool.

RESULTS

We screened 1,680 studies, with 48 RCTs included in the analysis. The most common procedure was sleeve gastrectomy (2,407 patients), followed by Roux-en-Y bypass (1,013 patients). Transverse abdominal plane (*n* = 983) was the most common truncal nerve block. Thirty studies examined postoperative pain, noting significant improvement when truncal nerve blocks or IPLA was compared to opioid-based analgesia at 0–1, 2–4, 6–8, 12, and 24 hr. Indirect comparison found moderate-certainty evidence favoring truncal nerve blocks over IPLA at 6–8 (MD, −0.39 points on 0–10 visual analog scale; *P* = 0.03) and 24 hr (MD, −0.57 points; *P* = 0.005). Twenty-six studies examined analgesic requirements, noting reduced morphine equivalents (MEQ) at 24 hr favouring truncal nerve blocks and IPLA over opioid-based analgesia. Indirect comparison noted low-certainty evidence favoring nerve blocks (MD, −6.2 MEQ; *P* < 0.001) over IPLA. Hospital length of stay, PONV, and adverse events were similar between the nerve block and IPLA groups.

DISCUSSION

This review comparing two common opioid-sparing analgesic techniques in bariatric surgery suggests that truncal nerve blocks may improve pain control and reduce opioid requirements compared to IPLA. The superiority of IPLA and nerve blocks compared to opioid-based analgesia matches previously published RCTs.[5] Key strengths of our review include the large number of RCTs, the use of direct and indirect comparison, and similarities between included studies that satisfy the assumption of transitivity. Limitations include the lack of studies directly comparing nerve blocks to IPLA. Future research should focus on head-to-head trials, novel opioid-sparing analgesic techniques, and adjuvants to improve block duration.

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Table Summary of study results and Grading of Recommendations, Assessment, Development and Evaluation (GRADE) assessment

Endpoint	Timepoint	Intervention	Comparator	Studies (Patients)	Effect (95% CI)	P Value	I^2	GRADE Certainty	Justification
Postoperative Pain (0-10 VAS Scale)	0-1h	Truncal Nerve Block	IPLA	6 studies (n = 526)	MD -0.7 (-1.6, 0.2)	0.13	49%	Very Low	Rated down: 1) High risk of bias RCT; 2) Indirect comparison; 3) Upper and lower CIs conflict;
	2-4h			8 studies (n = 665)	MD -0.3 (-0.6, 0.1)	0.19	24%	Very Low	Rated down: 1) Indirect comparison; 2) Upper and lower CIs conflict; 3) Potential publication bias (p = 0.001).
	6-8h			14 studies (n = 1129)	MD -0.4 (-0.7, -0.04)	0.03	53%	Moderate	Rated down: 1) Indirect comparison
	12h			8 studies (n = 679)	MD -0.5 (-1.2, 0.1)	0.103	93%	Very Low	Rated down: 1) Considerable heterogeneity; 2) Indirect comparison; 3) Upper and lower CIs conflict;
	24h			13 studies (n = 1092)	MD -0.6 (-1.0, -0.2)	0.005	54%	Moderate	Rated down: 1) Indirect comparison
Analgesic Requirements (MEQ)	24h	Truncal Nerve Block	IPLA	15 studies (n = 993)	MD -6.2 (-8.5, -3.9)	< 0.001	55%	Low	Rated down: 1) Indirect comparison; 2) Potential Publication Bias (p = 0.047)
Hospital Length of Stay (Days)	N/A	Truncal Nerve Block	IPLA	8 studies (n = 692)	MD -0.2 (-0.5, 0.2)	0.302	61%	Very Low	Rated down: 1) High risk of bias RCT; 2) Indirect comparison; 3) Upper and lower CIs conflict;
PONV	Discharge	Truncal Nerve Block	IPLA	9 studies (n = 725)	OR 1.17 (0.57, 2.42)	0.668	22%	Low	Rated down: 1) Indirect comparison; 2) Upper and lower CIs conflict;
Adverse Events	Discharge	Truncal Nerve Block	IPLA	7 studies (n = 613)	OR 0.22 (0.04, 1.14)	0.07	16%	Low	Rated down: 1) Indirect comparison; 2) Upper and lower CIs conflict;

Stroke in disguise: delayed diagnosis of frontal lobe embolic stroke following insertion of interscalene block for shoulder surgery: a case report

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119

AUTHORS

Giba, Kathryn;[1] Bansal, Shikha;[1,2] Bharathidasan, Sudhakar S.[1,2]

[1]Department of Anesthesia, Thunder Bay Regional Health Sciences Centre, Thunder Bay, ON, Canada; [2]Northern Ontario School of Medicine University, Thunder Bay, ON, Canada

INTRODUCTION

Perioperative stroke, occurring intraoperatively or within 30 days post-surgery, can be embolic, thrombotic, or hemorrhagic, leading to motor, sensory, or cognitive dysfunction lasting at least 24 hr. Its incidence is estimated at 0.1–1% in non-cardiac and non-neurologic surgeries.[1,2] Diagnosis is often delayed due to overlapping symptoms from surgery, anesthesia, and pain management.

One such pain management method is the interscalene brachial plexus block (ISB), used in shoulder or upper arm surgeries. Interscalene brachial plexus blocks can occasionally cause Horner's Syndrome (ipsilateral miosis, ptosis, and anhidrosis) via cervical sympathetic ganglia blockade, mimicking stroke symptoms.[2,3] We present a case of right frontal lobe embolic stroke resembling ISB-induced Horner's Syndrome, emphasizing the need for patient education and careful assessment in surgical patients with stroke-like symptoms.

CASE PRESENTATION

A 71-yr-old male underwent left shoulder replacement under general anesthesia with an interscalene block (ISB) catheter for postoperative pain control. He was discharged the same day, and the Acute Pain Service (APS) followed up until postoperative day (POD) three. On POD one, he reported no adverse effects, including Horner's syndrome. However, on POD 3, his wife informed APS of a left-sided facial droop, thick lips, slightly slurred speech, and persistent hiccups that began approximately 48 hr post-surgery. They had removed the ISB themselves, mistaking the symptoms for Horner's syndrome, with no improvement.

The APS Nurse Practitioner assessed him later that day and observed left-sided facial droop, with no motor or sensory deficits in his extremities and no walking impairment. Concerned about possible neurological issues the patient was referred to the emergency department (ED) for further evaluation.

In the ED, a carotid Doppler revealed a likely occluded right internal carotid artery and severe left internal carotid artery stenosis. Computed tomography imaging and angiography showed a subacute right frontal infarct, complete occlusion of the right internal carotid artery,

and left internal carotid artery stenosis. Lab results were unremarkable. Neurology diagnosed him with right frontal infarct. He was admitted under neurology for medical management and further evaluation.

CONCLUSION

We report a case of a patient who misinterpreted symptoms of embolic stroke for symptoms of Horner's syndrome secondary to ISB. This resulted in delayed presentation to the emergency room. Interscalene brachial plexus blocks are highly effective for postoperative pain control in upper limb surgeries. However, they can occasionally cause adverse effects, that can mimic neurological symptoms, potentially delaying the diagnosis of perioperative stroke. This case underscores the importance of patient education in differentiating Horner's syndrome from stroke. It also highlights the critical importance of timely and thorough evaluation of patients with an ISB who present with symptoms suggestive or perioperative stroke.

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