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Original Research Article

Perioperative Intravenous Lignocaine and Postoperative Analgesic Requirements Following Abdominal Surgery: A Descriptive Observational Study

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ABSTRACT
Background: Postoperative pain after abdominal surgery often necessitates substantial opioid administration, particularly after prolonged open procedures. Intravenous lignocaine has been incorporated into multimodal anaesthetic regimens because of its analgesic, antihyperalgesic, and anti-inflammatory properties. However, postoperative analgesic requirements may vary considerably according to surgical magnitude and operative approach.
Objectives: To describe postoperative pain trajectories, opioid requirements, rescue analgesia, postoperative nausea and vomiting, and hospital stay among patients receiving intravenous lignocaine as part of general anaesthesia for abdominal surgery. A secondary objective was to compare these outcomes between laparoscopic and open surgical approaches.
Methods: This descriptive observational study included 80 adults undergoing abdominal surgery under general anaesthesia with intraoperative intravenous lignocaine. Lignocaine was administered as a 60 mg intravenous bolus followed by an infusion at 1.5 mg/kg/h. Pain intensity was measured using a 0-10 visual analogue scale at post-anaesthesia care unit admission and at 2, 6, 12, 24, and 48 hours. Morphine-equivalent opioid consumption, rescue analgesia, postoperative nausea and vomiting, and length of hospital stay were recorded. Repeated pain scores were compared using the Friedman test. Outcomes between laparoscopic and open procedures were examined using the Mann-Whitney U test and Fisher's exact test.
Results: The mean age was 54.94±11.92 years, and 40 participants each were male and female. Fifty procedures (62.5%) were laparoscopic and 30 (37.5%) were open. Mean pain scores declined from 4.38±1.84 at post-anaesthesia care unit admission to 3.54±1.71 at 2 hours, 3.16±1.73 at 6 hours, 2.55±1.67 at 12 hours, 1.95±1.47 at 24 hours, and 1.14±1.29 at 48 hours (Friedman x^2=378.889, $p<0.001$). Mean morphine-equivalent opioid consumption was 27.75±18.57 mg during 0-24 hours and 15.62±14.97 mg during 24-48 hours. Rescue analgesia was required in 30 patients (37.5%), while postoperative nausea and vomiting occurred in 21 (26.3%). Compared with laparoscopic procedures, open procedures were associated with higher 0-24-hour opioid consumption (46.67±14.61 vs 16.40±8.89 mg), rescue analgesia requirement (80.0% vs 12.0%), postoperative nausea and vomiting (66.7% vs 2.0%), and hospital stay (7.87±2.83 vs 2.72±1.34 days), with all comparisons yielding $p<0.001$.
Conclusion: Pain scores declined progressively during the first 48 postoperative hours among abdominal surgical patients receiving intraoperative intravenous lignocaine. Nevertheless, substantial analgesic requirements persisted after open and prolonged operations. Because the study lacked a non-lignocaine comparator, the findings describe postoperative recovery under a lignocaine-containing multimodal regimen rather than establishing an independent opioid-sparing effect.

Keywords: Intravenous Lignocaine, Lidocaine Infusion, Postoperative Pain, Abdominal Surgery, Opioid Consumption, Multimodal Analgesia, Visual Analogue Scale.

INTRODUCTION

Pain following abdominal surgery is not attributable to a single nociceptive mechanism. Incisional tissue injury, visceral manipulation, inflammatory mediator release, abdominal wall retraction, and, in some procedures, prolonged exposure of the peritoneal cavity contribute simultaneously to the postoperative pain response. The intensity of that response is influenced by operative approach, procedure duration, anatomical extent, pre-existing patient characteristics, and the effectiveness of multimodal analgesia.[1]

Although opioids remain important for the management of moderate-to-severe postoperative pain, unrestricted reliance on them may delay recovery. Sedation, nausea, vomiting, respiratory depression, impaired gastrointestinal motility, urinary retention, and delayed mobilisation are particularly relevant after abdominal operations.[2] These consequences have encouraged a shift towards opioid-sparing perioperative pathways in which several analgesic mechanisms are targeted concurrently rather than escalating a single drug.[3]

Intravenous lignocaine, also referred to as lidocaine, is one component of such regimens. Its perioperative analgesic effects appear to extend beyond transient sodium-channel blockade. Experimental and clinical evidence suggests modulation of central sensitisation, attenuation of inflammatory signalling, and suppression of ectopic neuronal discharge even after plasma concentrations have declined.[4] These properties have led to its use during colorectal, upper abdominal, laparoscopic, gynaecological, and other major operations.

The evidence, however, remains heterogeneous. Earlier systematic reviews suggested that systemic lignocaine could reduce pain, opioid consumption, postoperative ileus, nausea, and hospital stay, with the most consistent benefits observed in abdominal surgery.[5-7] More recent evaluations have been less uniform, particularly where enhanced recovery protocols already contain several non-opioid interventions. Differences in bolus dose, infusion rate, duration of treatment, surgical procedure, and comparator analgesia make a single effect estimate difficult to apply across clinical settings.[8]

Safety also requires attention. Intravenous lignocaine has a narrow therapeutic margin when administered incorrectly, and toxicity may manifest as circumoral numbness, tinnitus, altered sensorium, seizures, conduction disturbance, or cardiovascular collapse. International consensus recommendations therefore regard perioperative lignocaine as a high-risk medicine that should be delivered using controlled dosing, appropriate patient selection, and institutional monitoring protocols.[9]

Another interpretive difficulty arises when patients receiving lignocaine undergo markedly different operations. A short laparoscopic appendectomy and an open pancreatic procedure cannot reasonably be expected to generate comparable pain or opioid requirements. Any observational evaluation must therefore distinguish the postoperative course under lignocaine-based anaesthesia from evidence that lignocaine itself caused the observed outcome.

The present study examined pain scores over 48 hours, perioperative opioid requirements, rescue analgesia, postoperative nausea and vomiting, and hospital stay among patients who received intravenous lignocaine during general anaesthesia for abdominal surgery. Outcomes were additionally compared between laparoscopic and open procedures to explore the influence of surgical approach and operative magnitude.

MATERIALS AND METHODS

Study Design and Setting

A hospital-based descriptive observational study was conducted among adult patients undergoing abdominal surgery under general anaesthesia.

Study Period

2023-2025

Study Population

The study included 80 patients who received intravenous lignocaine as part of the intraoperative anaesthetic and analgesic regimen for abdominal surgery.

Surgical Procedures

The procedures comprised appendectomy, cholecystectomy, colectomy, gastrectomy, hernia repair, hysterectomy, and pancreatic surgery. Operations were classified as laparoscopic or open.

Intravenous Lignocaine Administration

Patients received a 60 mg intravenous lignocaine bolus followed by an intraoperative infusion at 1.5 mg/kg/h. The cumulative lignocaine dose and intraoperative fentanyl requirement were recorded for each patient.

Outcome Measures

Postoperative pain intensity was assessed using a visual analogue scale ranging from 0, indicating no pain, to 10, indicating the worst imaginable pain. Scores were recorded at admission to the post-anaesthesia care unit and at 2, 6, 12, 24, and 48 hours after surgery. Opioid consumption was converted into intravenous morphine-equivalent doses and reported separately for the first 24 hours and the subsequent 24-48-hour period. The requirement for rescue analgesia, occurrence of postoperative nausea and vomiting, and postoperative length of hospital stay were also recorded.

Statistical Analysis

Continuous variables were summarised as mean±standard deviation, median, and range, as appropriate. Categorical variables were presented as frequency and percentage. Changes in visual analogue scale scores across repeated postoperative time points were assessed using the Friedman test because pain scores were ordinal repeated measurements. Continuous outcomes between laparoscopic and open surgical approaches were compared using the Mann-Whitney U test. Fisher's exact test was used for categorical comparisons involving rescue analgesia and postoperative nausea and vomiting. Spearman's rank correlation was used to examine associations between operative characteristics and opioid consumption. A p-value below 0.05 was considered statistically significant.

RESULTS

Participant and Operative Characteristics

The study included 80 patients, comprising 40 males (50.0%) and 40 females (50.0%). Mean age was 54.94±11.92 years, with a range of 33-77 years. Mean body mass index was 27.93±2.97 kg/m².

Most participants were classified as ASA grade II, accounting for 44 patients (55.0%). Eight patients (10.0%) were ASA grade I and 28 (35.0%) were ASA grade III. Fifty operations (62.5%) were performed laparoscopically, while 30 (37.5%) involved an open approach.

The mean operative duration was 95.65±49.55 minutes. All patients received a 60 mg intravenous lignocaine bolus followed by an infusion at 1.5 mg/kg/h. The mean cumulative lignocaine dose was 220.96±111.78 mg, and the mean intraoperative fentanyl requirement was 176.78±75.41 µg (Table 1).

Characteristic	Overall Value, N=80
Age, Years	54.94±11.92
Age Range, Years	33-77
Male Sex	40 (50.0%)
Female Sex	40 (50.0%)
BMI, Kg/M²	27.93±2.97
ASA Grade I	8 (10.0%)
ASA Grade II	44 (55.0%)
ASA Grade III	28 (35.0%)
Laparoscopic Approach	50 (62.5%)
Open Approach	30 (37.5%)
Duration Of Surgery, Min	95.65±49.55
Lignocaine Bolus, Mg	60
Lignocaine Infusion Rate, Mg/Kg/H	1.5
Total Lignocaine Dose, Mg	220.96±111.78
Intraoperative Fentanyl, µg	176.78±75.41

Table 1. Demographic, Operative, and Analgesic Characteristics of the Study Population

Values Are Mean±Standard Deviation Or N (%). BMI: Body Mass Index; ASA: American Society Of Anesthesiologists

Distribution of Surgical Procedures

Colectomy was the most frequent operation, performed in 16 patients (20.0%), followed by cholecystectomy in 15 (18.8%) and appendectomy in 14 (17.5%). Hernia repair was performed in 11 patients (13.8%), hysterectomy in 10 (12.5%), and gastrectomy

and pancreatic surgery in seven patients each (8.8%).

The longest procedures were pancreatic operations, with a mean duration of 184.00 minutes, followed by gastrectomy at 161.14 minutes and colectomy at 138.50 minutes. These procedures also demonstrated the greatest postoperative opioid requirements and longest hospital stays (Table 2).

Surgical Procedure	N (%)	Mean Operative Duration, Min	Mean PACU VAS	Mean Opioid Consumption 0-24 H, MEQ Mg	Mean Opioid Consumption 24-48 H, MEQ Mg	Rescue Analgesia, N	PONV, N	Mean Hospital Stay, Days
Appendectomy	14 (17.5%)	39.57	2.71	9.71	2.43	0	0	1.79
Cholecystectomy	15 (18.8%)	59.93	3.27	14.67	4.93	0	0	2.40
Colectomy	16 (20.0%)	138.50	5.88	42.50	27.00	16	7	6.75
Gastrectomy	7 (8.8%)	161.14	7.00	53.14	37.14	7	7	9.00
Hernia Repair	11 (13.8%)	62.45	3.82	18.91	7.64	0	0	2.82
Hysterectomy	10 (12.5%)	88.00	3.10	16.60	6.30	0	0	2.90
Pancreatic Surgery	7 (8.8%)	184.00	7.57	63.43	44.57	7	7	11.43

Table 2. Postoperative Outcomes According to Type of Abdominal Surgery

PACU: Post-Anaesthesia Care Unit; VAS: Visual Analogue Scale; MEQ: Morphine-Equivalent Dose; PONV: Postoperative Nausea And Vomiting

Postoperative Pain Trajectory

Mean visual analogue scale pain score at PACU admission was 4.38±1.84. The score declined to 3.54±1.71 at 2 hours and 3.16±1.73 at 6 hours. A further decrease was observed at 12 hours, when the mean score was 2.55±1.67, followed by 1.95±1.47 at 24 hours and 1.14±1.29 at 48 hours.

The decline across postoperative time points was statistically significant (Friedman $\chi^2=378.889$, $p<0.001$), demonstrating a consistent reduction in pain intensity during the first 48 postoperative hours (Table 3).

Outcome	Mean±SD	Median	Range
VAS At PACU Admission	4.38±1.84	4	2-8
VAS At 2 H	3.54±1.71	3	1-7
VAS At 6 H	3.16±1.73	2.5	1-7
VAS At 12 H	2.55±1.67	2	0-6
VAS At 24 H	1.95±1.47	1	0-5
VAS At 48 H	1.14±1.29	1	0-4
Opioid Consumption 0-24 H, MEQ Mg	27.75±18.57	18	6-70
Opioid Consumption 24-48 H, MEQ Mg	15.62±14.97	8	0-50
Length Of Hospital Stay, Days	4.65±3.21	3	1-13

Table 3. Postoperative Visual Analogue Scale Scores and Analgesic Outcomes

Friedman Test For Change In VAS Across The Six Postoperative Assessments: $X^2=378.889$, $P<0.001$. SD: Standard Deviation; PACU: Post-Anaesthesia Care Unit; VAS: Visual Analogue Scale; MEQ: Morphine-Equivalent Dose

Opioid Requirement and Adverse Events

Mean morphine-equivalent opioid consumption during the first 24 postoperative hours was

27.75±18.57 mg. Consumption declined to 15.62±14.97 mg during the 24-48-hour period. Rescue analgesia was required in 30 patients (37.5%). Postoperative nausea and vomiting occurred in 21 patients (26.3%). The mean postoperative hospital stay was 4.65±3.21 days, ranging from 1 to 13 days. All 28 ASA grade III patients required rescue analgesia, compared with two of 44 ASA grade II patients and none of the eight ASA grade I patients (χ^2=71.855, p<0.001). Postoperative nausea and vomiting occurred in 21 of 28 ASA grade III patients and in none of the ASA grade I or II patients (χ^2=52.881, p<0.001). These findings reflect the clustering of extensive open operations and prolonged procedures among patients with higher ASA grades.

Comparison between Laparoscopic and Open Surgery

Patients undergoing open surgery were older and had higher body mass index values than those undergoing laparoscopic procedures. Open operations were also markedly longer, with a mean duration of 143.53±38.54 minutes compared with 66.92±28.86 minutes for laparoscopic surgery.

The mean PACU pain score was 6.33±1.24 following open surgery and 3.20±0.90 following laparoscopic surgery. This difference persisted throughout the 48-hour assessment period. Mean opioid consumption during the first 24 hours was 46.67±14.61 mg after open surgery compared with 16.40±8.89 mg following laparoscopic surgery. Corresponding consumption during 24-48 hours was 31.20±12.41 and 6.28±5.70 mg, respectively.

Rescue analgesia was needed in 24 of 30 patients undergoing open surgery (80.0%), compared with six of 50 patients undergoing laparoscopic surgery (12.0%), p<0.001. Postoperative nausea and vomiting occurred in 20 open-surgery patients (66.7%) but in only one laparoscopic patient (2.0%), p<0.001. Mean hospital stay was also longer following open surgery, at 7.87±2.83 days compared with 2.72±1.34 days following laparoscopic surgery (Table 4).

Outcome	Laparoscopic, N=50	Open, N=30	P-Value
Age, Years	48.68±8.65	65.37±8.96	<0.001
BMI, Kg/M²	26.52±2.32	30.28±2.42	<0.001
Duration Of Surgery, Min	66.92±28.86	143.53±38.54	<0.001
Total Lignocaine Dose, Mg	155.56±60.35	329.97±90.66	<0.001
Intraoperative Fentanyl, µg	132.86±42.05	249.97±60.30	<0.001
VAS At PACU Admission	3.20±0.90	6.33±1.24	<0.001
VAS At 2 H	2.46±0.79	5.33±1.24	<0.001
VAS At 6 H	2.08±0.90	4.97±1.19	<0.001
VAS At 12 H	1.50±0.79	4.30±1.21	<0.001
VAS At 24 H	1.06±0.89	3.43±0.97	<0.001
VAS At 48 H	0.36±0.69	2.43±0.97	<0.001
Opioid Consumption 0-24 H, MEQ Mg	16.40±8.89	46.67±14.61	<0.001
Opioid Consumption 24-48 H, MEQ Mg	6.28±5.70	31.20±12.41	<0.001
Rescue Analgesia Required	6 (12.0%)	24 (80.0%)	<0.001
PONV	1 (2.0%)	20 (66.7%)	<0.001
Length Of Hospital Stay, Days	2.72±1.34	7.87±2.83	<0.001

Table 4. Comparison of Perioperative and Postoperative Outcomes between Laparoscopic and Open Surgery

Continuous Variables Were Compared Using The Mann-Whitney U Test. Categorical Variables Were Compared Using Fisher's Exact Test. BMI: Body Mass Index; VAS: Visual Analogue Scale; PACU: Post-Anaesthesia Care Unit; MEQ: Morphine-Equivalent Dose; PONV: Postoperative Nausea And Vomiting

Associations with Postoperative Opioid Consumption

First-24-hour opioid consumption demonstrated strong positive correlations with operative duration (Spearman ρ=0.956, p<0.001), total lignocaine dose (ρ=0.989, p<0.001), intraoperative fentanyl use (ρ=0.958, p<0.001), PACU pain score (ρ=0.950, p<0.001), opioid consumption during 24-48 hours (ρ=0.993, p<0.001), and hospital stay (ρ=0.960, p<0.001).

The strong relationship between total lignocaine dose and opioid use should not be

interpreted as evidence that lignocaine increased opioid requirements. Higher doses were administered during longer and more extensive procedures, which themselves generated greater postoperative analgesic needs.

DISCUSSION

The present study describes the postoperative course of a heterogeneous abdominal surgical population managed with an intraoperative intravenous lignocaine regimen. Three findings stand out. First, pain intensity declined consistently from PACU admission through 48 hours. Second, opioid consumption was concentrated within the initial 24 postoperative hours and decreased during the subsequent day. Third, surgical approach and procedural magnitude remained dominant determinants of pain, rescue analgesia, postoperative nausea and vomiting, and length of hospital stay.

The reduction in mean pain score from 4.38 at PACU admission to 1.14 at 48 hours is compatible with the expected resolution of acute postoperative nociception under multimodal analgesia. Yet the absence of an untreated or placebo comparison prevents attribution of this trajectory specifically to lignocaine. Postoperative pain naturally decreases with time, and every patient also received fentanyl and postoperative opioids. The appropriate interpretation is therefore that pain was progressively controlled under a regimen that included intravenous lignocaine, not that lignocaine alone produced the observed reduction.

Earlier evidence has supported a potentially useful opioid-sparing role for systemic lignocaine in abdominal surgery. Koppert et al. reported lower pain during movement and reduced morphine consumption following major abdominal surgery among patients who received perioperative lignocaine.[10] Meta-analyses by Marret et al. and Sun et al. similarly suggested reductions in postoperative pain, opioid requirement, ileus duration, and hospital stay, although effect sizes varied across procedures and dosing schedules.[6,7]

The broader literature has not been entirely consistent. A Cochrane review found that intravenous lignocaine may reduce early postoperative pain, but the certainty of evidence was limited by heterogeneity, small trials, variable comparators, and inconsistent adverse-event reporting.[8] McCarthy et al. also noted that benefit appeared more pronounced in abdominal operations than in several non-abdominal surgical populations.[4] Such variation is clinically plausible. Visceral manipulation and peritoneal inflammation may be more responsive to the anti-inflammatory and antihyperalgesic effects proposed for systemic lignocaine than pain dominated by other tissue mechanisms.

The findings of the present study are also consistent with the observation that operative magnitude may overwhelm the contribution of any single analgesic adjunct. Open procedures had nearly three times the 0-24-hour morphine-equivalent requirement of laparoscopic procedures. Pain scores after open surgery remained higher at every recorded time point, despite larger cumulative lignocaine doses. These patients were older, had higher body mass index values, underwent longer operations, and were more frequently classified as ASA grade III. Thus, the open-versus-laparoscopic comparison should be interpreted as a description of two clinically different surgical populations, not as an isolated effect of incision type.

Procedure-specific patterns reinforce this point. Appendectomy and cholecystectomy were associated with relatively low PACU pain scores and short hospital stays. At the other end of the spectrum, pancreatic surgery and gastrectomy generated the highest pain scores, opioid use, rescue analgesia rates, and hospital stay. All seven pancreatic procedures required rescue analgesia, and all seven were associated with postoperative nausea and vomiting. These findings are clinically credible because upper abdominal and pancreatic operations generally involve prolonged dissection, extensive visceral manipulation, and greater tissue trauma.

The mean morphine-equivalent requirement was 27.75 mg during the first 24 hours and 15.62 mg during the next 24 hours. This temporal reduction resembles patterns reported in trials where lignocaine was incorporated into opioid-sparing pathways, although direct numerical comparison is difficult because studies have used different opioids, conversion methods, infusion durations, and pain protocols. Ho et al., for example, observed reduced cumulative opioid consumption during prolonged lignocaine infusion after open colorectal surgery but did not demonstrate lower pain scores or shorter hospital stay.[11] Their findings underscore that reduced opioid exposure and improved pain scores do not necessarily occur together.

More recent evidence has also produced mixed results. Casas-Arroyave et al. found

intravenous lignocaine to be non-inferior to thoracic epidural analgesia for dynamic pain following major abdominal surgery, with relatively small differences in morphine consumption.[12] In contrast, a randomised study comparing lignocaine with thoracic epidural analgesia during laparoscopic colorectal surgery reported better ward analgesia and lower rescue opioid requirements with the epidural technique.[13] Intravenous lignocaine should therefore be viewed as one option within multimodal care, not a universal substitute for regional or neuraxial analgesia.

Postoperative nausea and vomiting occurred in approximately one-quarter of the cohort, but nearly all events were concentrated among patients undergoing open surgery. This pattern likely reflects a combination of greater opioid exposure, longer anaesthetic duration, extensive upper abdominal surgery, and patient-level risk factors. It cannot be assumed that lignocaine either prevented or caused these events. Earlier meta-analyses have suggested modest reductions in nausea and vomiting with lignocaine, probably mediated partly by lower opioid exposure, but confidence in this outcome has remained limited.[5,7]

No specific neurological or cardiovascular manifestations of lignocaine toxicity were represented among the recorded adverse outcomes. Nonetheless, the absence of recorded toxicity should not be equated with comprehensive safety confirmation. Plasma lignocaine concentrations, electrocardiographic abnormalities, perioral symptoms, tinnitus, altered sensorium, and other recognised toxicity indicators were not available for analysis. Current consensus guidance recommends calculating doses according to ideal body weight, generally limiting the initial bolus to approximately 1.5 mg/kg and the infusion to no more than 1.5 mg/kg/h for 24 hours, unless a locally approved protocol provides otherwise.[9] The fixed 1.5 mg/kg/h infusion used in this cohort should nevertheless be administered under an approved protocol with appropriate monitoring.

The strong positive correlation between cumulative lignocaine dose and postoperative opioid use is particularly important to interpret correctly. At first glance, it could appear paradoxical. In reality, total lignocaine dose increased with operative duration and procedure complexity. The same patients also received more fentanyl, experienced greater pain, and remained in hospital longer. This is a classic example of confounding by indication and exposure duration. Without multivariable adjustment or a comparator group, the correlation cannot be used to infer pharmacological harm or lack of efficacy.

The study has practical relevance in Indian perioperative care, where case mix frequently spans short laparoscopic procedures and advanced open abdominal operations within the same surgical unit. Resource availability for epidural services, acute pain teams, infusion pumps, and continuous monitoring may also vary. Intravenous lignocaine may be attractive because it is inexpensive and familiar, but its apparent simplicity should not reduce attention to contraindications, dosing, infusion-pump safeguards, and toxicity surveillance.

Limitations

The principal strength of the study is the detailed assessment of pain at six postoperative time points together with morphine-equivalent opioid consumption, rescue analgesia, postoperative nausea and vomiting, operative characteristics, and hospital stay. The inclusion of several abdominal procedures provides a clinically broad view of postoperative analgesic requirements.

Several limitations are substantial. There was no control group receiving an otherwise comparable anaesthetic without lignocaine. Consequently, independent analgesic efficacy, opioid sparing, and safety attributable to lignocaine cannot be estimated. Surgical procedures were heterogeneous, and open surgery was strongly associated with older age, higher BMI, ASA grade III status, longer operative duration, and greater procedural complexity.

The analgesic protocol apart from intraoperative fentanyl and lignocaine was not characterised in sufficient detail to evaluate the contribution of paracetamol, non-steroidal anti-inflammatory drugs, regional blocks, wound infiltration, or patient-controlled analgesia. Pain at rest and movement was not differentiated. Preoperative pain, chronic opioid use, anxiety, incision length, postoperative complications, bowel recovery, and time to mobilisation were also unavailable.

Rescue analgesia was recorded as a binary outcome without documenting the exact drug, dose, timing, or threshold for administration. Postoperative nausea and vomiting were similarly recorded without severity grading or antiemetic treatment. Finally, formal indicators of systemic lignocaine toxicity and plasma drug concentrations were not assessed.

CONCLUSION

Among patients receiving intravenous lignocaine as part of general anaesthesia for abdominal surgery, postoperative pain scores decreased progressively over 48 hours and opioid consumption was greater during the first postoperative day than during the second. Open and prolonged abdominal operations remained associated with markedly higher pain scores, opioid requirements, rescue analgesia, postoperative nausea and vomiting, and hospital stay.

These observations support the feasibility of documenting lignocaine within a multimodal perioperative pathway, but they do not establish a causal opioid-sparing effect. Controlled, procedure-specific studies with standardised co-analgesia, explicit toxicity surveillance, and adjustment for operative complexity are required before the independent effectiveness of intravenous lignocaine can be determined.

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Nil.

Conflict of Interest

None declared.

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