

Comparison of transversus abdominis plan block and quadratus lumborum block for postoperative pain control following laparoscopic cholecystectomy

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SUBJECT AREAS

Anesthesiology & Pain Medicine

KEYWORDS

QLB, TAP Block, laparoscopic cholecystectomy

Abstract

Background

To compare Quadratus Lumborum Block (QLB) and Transversus Abdominis Plane (TAP) blocks for postoperative pain control following laparoscopic cholecystectomy.

Study and Design

Prospective randomized head-to-head clinical trial.

Methods

A total of 60 patients who were set to undergo elective laparoscopic cholecystectomy were randomly separated into two groups. QLB was preoperatively applied to 30 patients and TAP block was also applied to 30 patients. A record was made of the intraoperative additional fentanyl dose, and at postoperative 0-1-2-4-6-12-24 hours, records were made of cumulative morphine consumption, number of morphine requests, VAS values, shoulder pain, heartrate, systolic and diastolic blood pressure, SpO2, sedation score (Ramsey scale), itching, nausea and vomiting, respiratory depression, and other complications.

Results

In the examination of intraoperative additional fentanyl use, there was no requirement for additional fentanyl in 86.7% of the QLB group, while in 60% of the TAP group, there was seen to be at least one dose of additional fentanyl required. At all timepoints between 0 and 24 hours postoperatively, the cumulative morphine requests and morphine consumption values were significantly lower in the QLB group than in the TAP group. No statistically significant difference was determined between the groups with respect to nausea, vomiting, sedation, and itching as morphine-related side effects.

Conclusion

Morphine consumption was significantly lower in patients who underwent QLB procedure at 6, 12, 24, and 48 hours compared to the TAP group. In general, effective analgesia was provided by both methods, but more effective analgesia was determined to have been provided in the QLB group compared to the TAP group, and thus QLB can be preferable to TAP.

Full Text

Due to technical limitations, full-text HTML conversion of this manuscript could not be completed.

However, the manuscript can be downloaded and accessed as a PDF.

Figures

	QLB (n=30)	TAP (n=30)	p
Additional Fentanyl Dosage			
0	26 (86,7)	12 (40,0)	0.001*
1	4 (13,3)	17 (56,7)	
2	0 (0,0)	1 (3,3)	
Total	30 (100,0)	30 (100,0)	
* Chi-Square Test			

Figure 1

Comparison of Intraoperative Additional Fentanyl Dosage

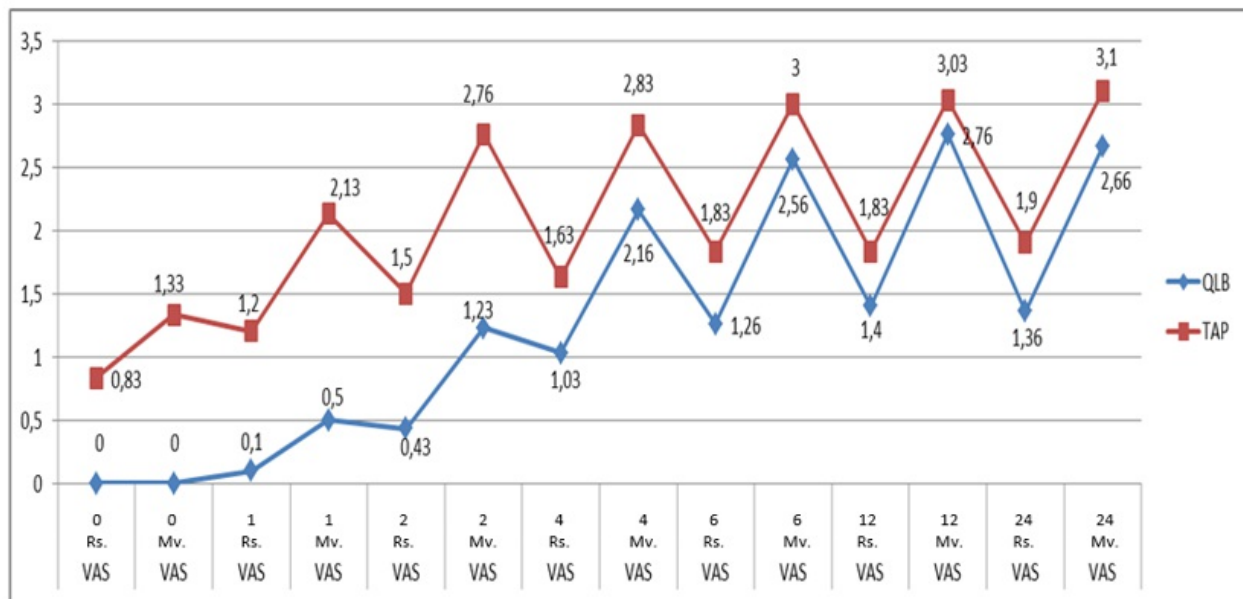


Figure 2

Postoperative Visual Analog Scale

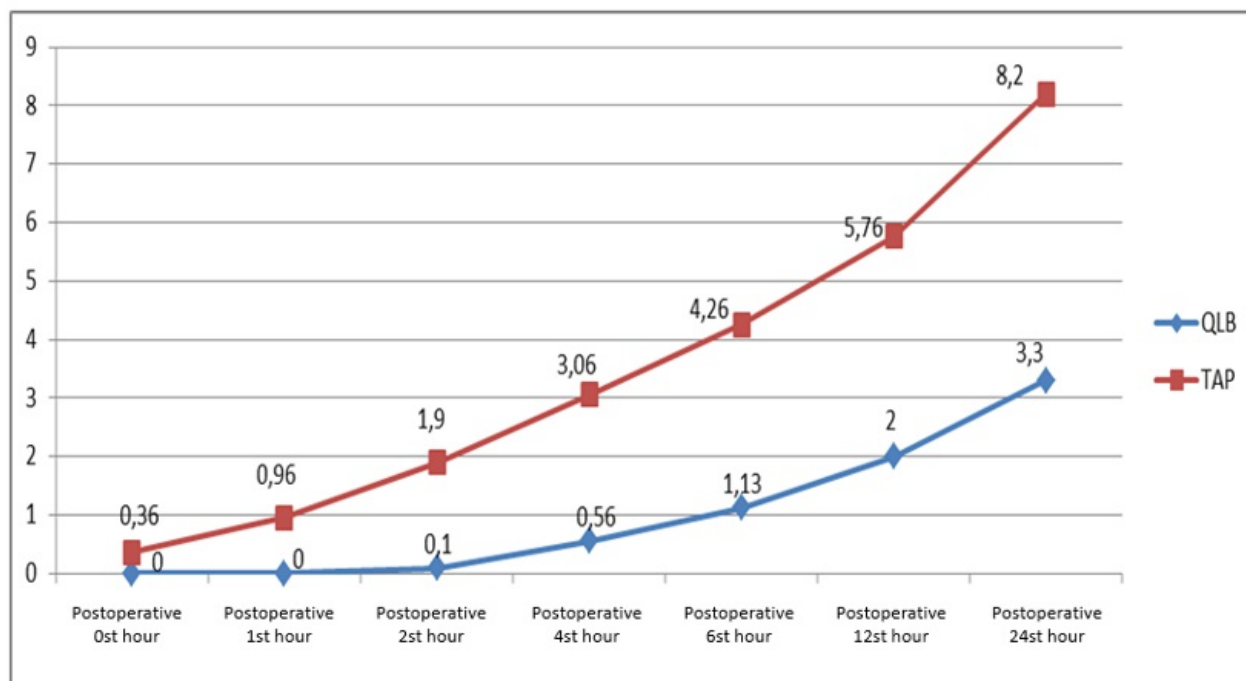


Figure 3

Postoperative Morphine Demand

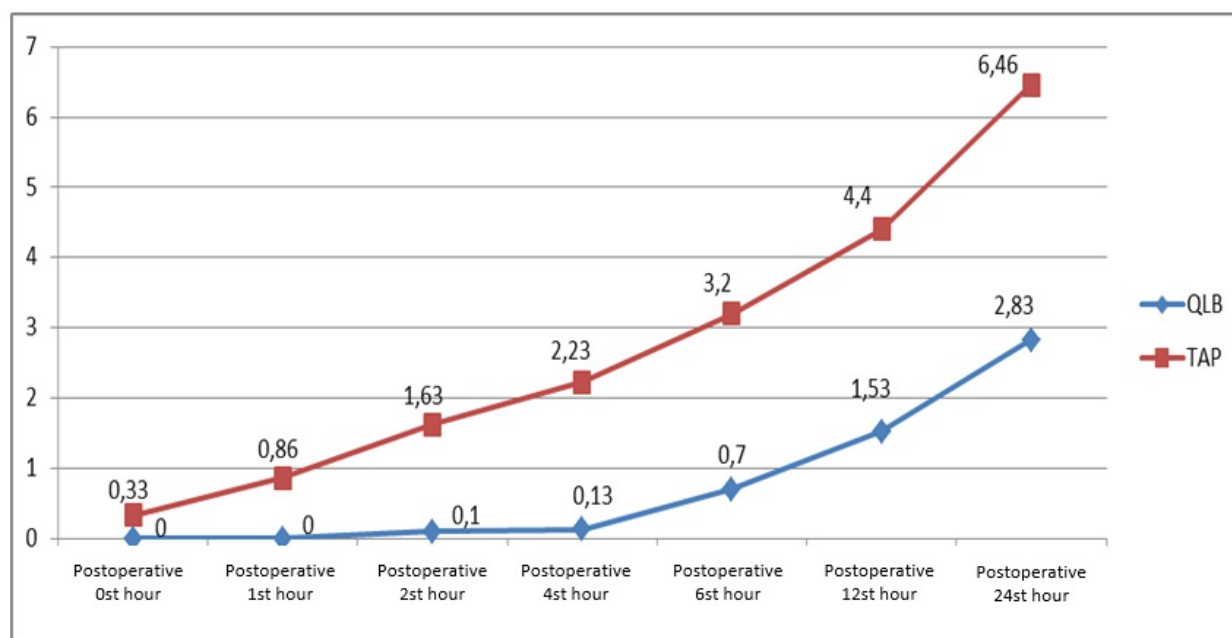


Figure 4

Postoperative Morphine Consumption

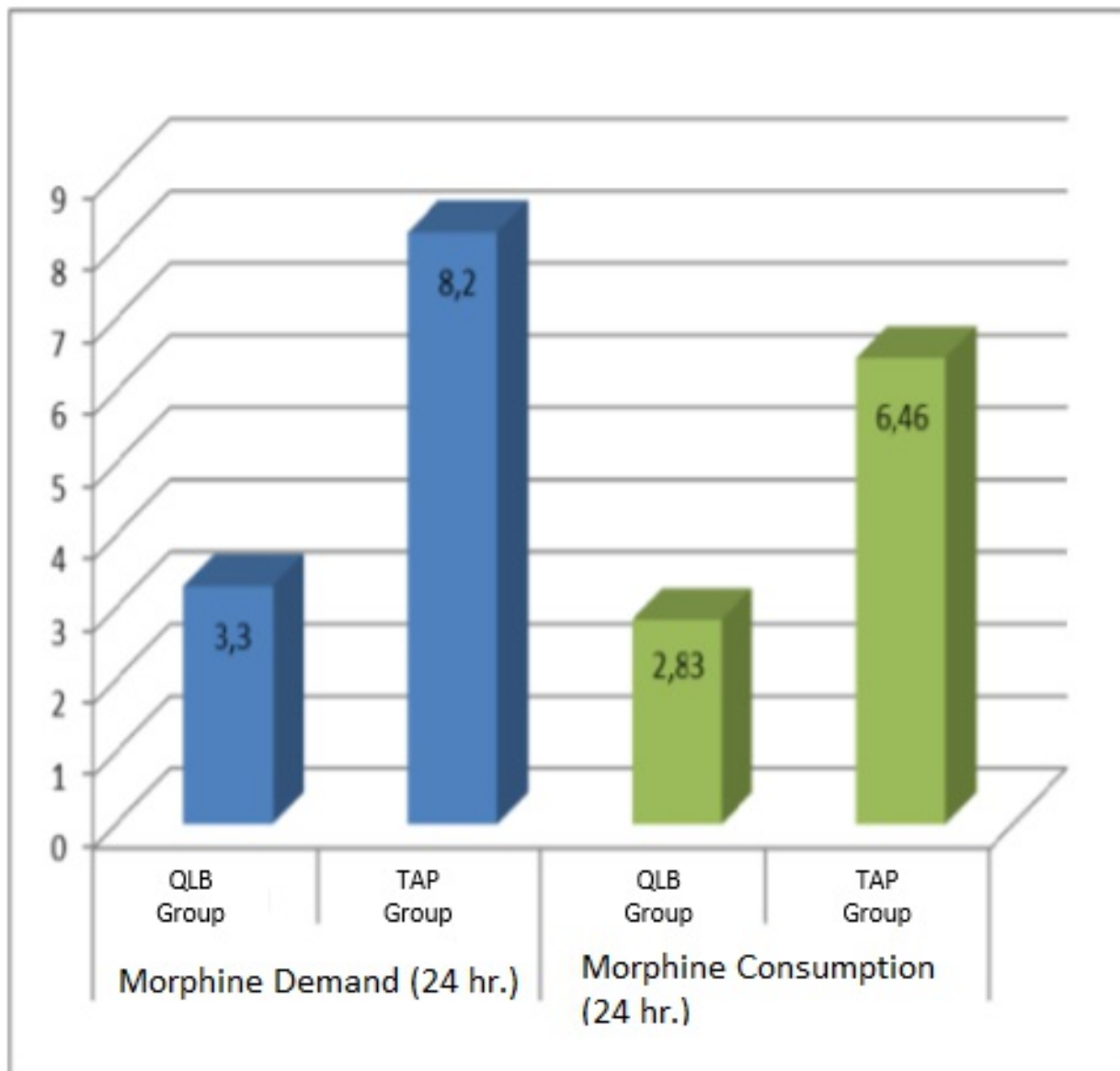


Figure 5

24-hour Total Morphine Demand and Consumption Average