THE COMPARISON OF SERRATUS ANTERIOR PLANE BLOCK VERSUS INTERCOSTAL BLOCK FOR POSTOPERATIVE ANALGESIA FOLLOWING THORACOTOMY SURGERY

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Introduction

Serratus anterior plane block was described by Blanco et al. in 2013 to provide anesthetic and analgesic blockade of lateral branches of intercostal nerves above and below the serratus anterior muscle.(1) Hence, we aimed to compare serratus anterior plane block (SAPB) with intercostal block (IB) regarding postoperative visual analog scale (VAS) scores for pain and analgesic consumption in patients undergoing thoracotomy operation.

Material and Method

After approved by local ethics committee patients who underwent thoracotomy operation in our hospital between May 2016 and June 2017 were examined retrospectively. A total of 42 patients were allocated into 2 groups. The patients in group IB received intercostal block and intravenous patient controlled analgesia(PCA) with tramadol, whereas the patients in group SAPB received serratus anterior plane block and PCA with tramadol.

Results

TABLE 1. Demographic and Clinical Data.			
	SAPB group (n=20)	IB group (n=22)	P
Age,y	48,70 ± 17,061	45,73 ± 18,846	0,623
Weight,kilo	68,80 ± 10,345	73,00 ± 7,93	0,10
Height,cm	166,75± 6,904	168,45 ± 7.701	0,402
Sex,M/F	9/11	13/9	0,367
ASA,I/II/III	8/9/3	8/11/3	0,890
Operation Time	159,5 ± 37,483	154,09 ± 40,668	0,684

ASA; American Society of Anesthesiologist Clasification; SAPB, Serratus anterior plane Block IB, Intercostal Block group.

VAS scores of the patients in the SAPB group were lower than those of the IB group at each time point (Figure 1). The total analgesic use in the first 24 hours postoperatively was significantly lower in the SAPB group as 238.5 ± 39.5 mg tramadol, compared to 306 ± 25.2 mg tramadol in the IB group (Figure 2).

Atelectasis, vomiting, nausea, hypotension, and bradycardia were investigated. No significant difference was determined between the groups in respect of complications .

Conclusion

IB and SAPB may be considered practical analgesia options where paravertebral and epidural block are contraindicated or unnecessarily invasive. However, we suggest that SAPB is more effective and has longer-lasting analgesia than IB following thoracotomy operations.

References

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