The Effect of Thoracal Paravertebral Block on Seroma Reduction in Breast Surger; a Randomized Controlled Trial

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Introduction

An increasing number of patients are being operated because of breast cancer. Seroma is the most common problem that occurs after surgery that increases morbidity. In addition, seroma is related to postoperative pain which can result in chronic pain. For postoperative pain management, thoracal paravertebral block (TPVB) has long been considered the gold standard technique. With performing TPVB, sympathetic nerves are also blocked. With this study, we aimed to search the effect of TPVB on seroma reduction in patients who undergo mastectomy and axillary node dissection surgery.

Methods

Forty ASA I-II female patients aged 18-65, who were scheduled to go under elective unilateral mastectomy and axillary lymph node resection were included to the study. Patients were randomized into two groups as TPVB and Control group. Ultrasound guided TPVB with 20 mL 0,25% bupivacaine was performed at T1 level preoperatively to the TPVB group patients. All patients were provided with iv patient controlled analgesia device. Seroma formation amounts, morphine consumptions and numeric rating scale (NRS) scores for pain were recorded 24th hour postoperatively.

Results

Mean seroma formation at postoperative 24th h was 112,5 ± 53,3 mL in the control group and 74,5 ± 47,4 mL in the TPVB group (p=0,022). NRS scores were similar between two groups (p=0,367) at postoperative 24th hour but mean morphine consumption at postoperative 24th h was 5,6 ± 4 in the TPBV group, and 16,6 ± 6,9 in the control group (p<0,001) (Table 1).

Table 2. Amount of seroma formation at the postoperative 24th h

	TPVB group (n=20)	Control group (n=20)	P
Seroma (mL)	112,5 ± 53,39	74,5 ± 47,4	0,022*
Morphine consumption (mg)	5,6 ± 4	16,6 ± 6,9	<0,001*
NRS scores	1 ± 1,3	0,7 ± 1	0,367

Data are presented as mean ± SD

Conclusions

TPVB reduces the amount of seroma formation while providing effective analgesia in patients who undergo mastectomy and axillary lymph node removal surgery.

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