

# Ultrasound Guided Erector Spinae Plane Block Reduces Postoperative Opioid Consumption Following Breast Surgery: A Randomized Controlled Study

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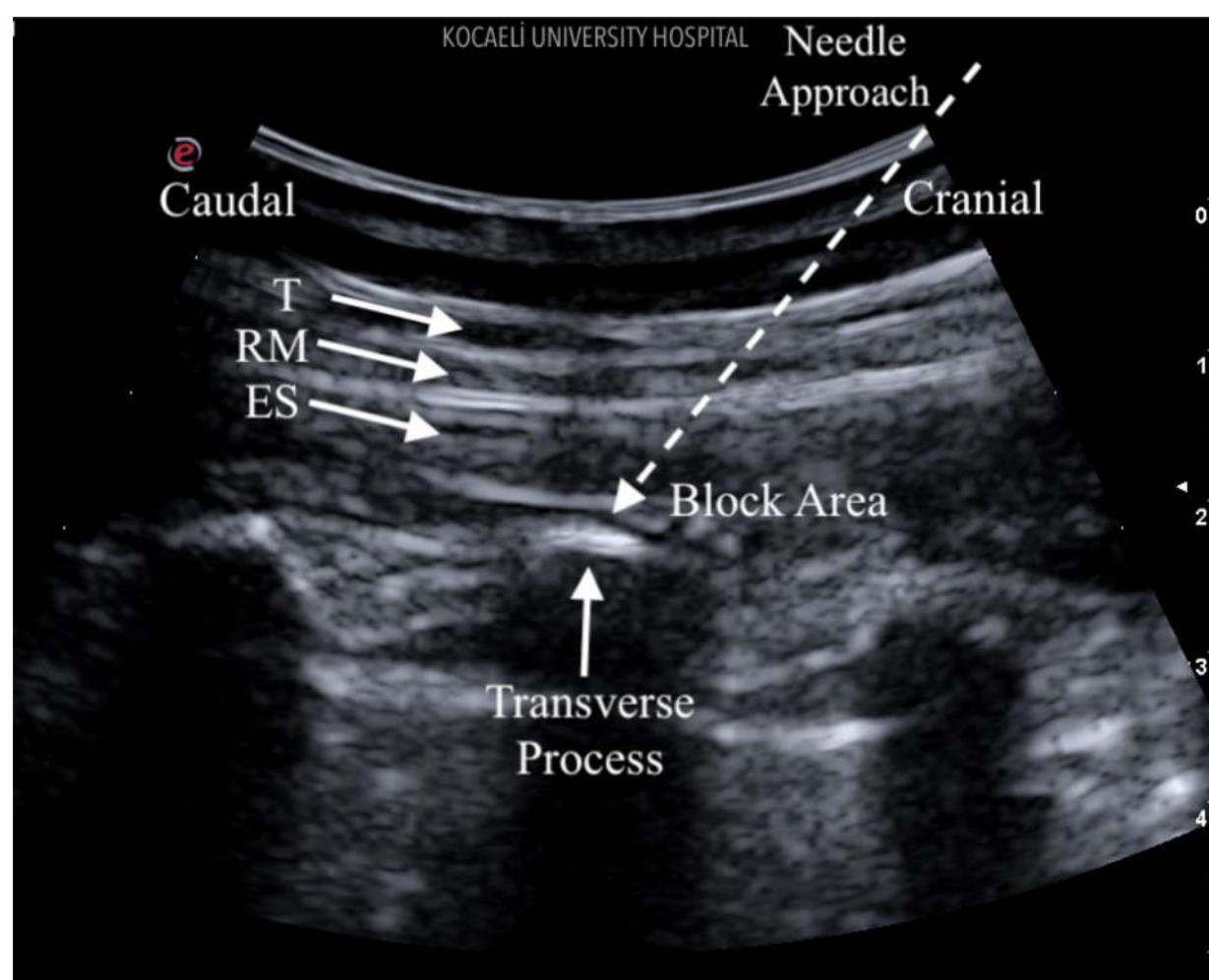
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## Purpose

Postoperative analgesia in breast surgery is a difficult and overworked issue due to extensive surgery and complex innervation of the breast. Erector spinae plane block (ESB) is a new defined regional anesthesia technique for thoracic analgesia. Although there are some case reports about ESB in breast surgeries, there is no published randomized controlled study in the literature about ESB use for this purpose. Main purpose of this study was to evaluate the analgesic effect of ultrasound guided ESB in breast surgery.

## Methods

Fifty ASA I-II female patients, aged 25-65, who were scheduled to go under elective breast surgery were included to the study. Patients were randomized into two group as ESB and Control group. Single shot ultrasound (US) guided ESB with 20ml 0.25 % bupivacaine was done preoperatively to all patients in ESB group. Patients in both groups were provided with iv patient controlled analgesia device containing morphine for the postoperative analgesia. Morphine consumptions and numeric rating scale (NRS) scores for pain were recorded at 1<sup>st</sup>, 6<sup>th</sup>, 12<sup>th</sup> and 24<sup>th</sup> hours postoperatively.



## Results

There were no significant differences between ESB and control groups for VAS scores at 1<sup>st</sup>, 6<sup>th</sup>, 12<sup>th</sup> and 24<sup>th</sup> hour (Median VAS values were 2, 2, 0, 0, and 2, 2, 1, 1 respectively). Postoperative morphine consumptions were significantly lower in ESB group compared to control group at postoperative 1<sup>st</sup>, 6<sup>th</sup>, 12<sup>th</sup>, 24<sup>th</sup> hour (Median doses of morphine consumptions were 1, 2, 3, 5 and 1, 5, 10, 16 mg respectively) ( $p < 0.05$ ).

	ESB Group (n=25)	Control Group (n=25)	<i>p</i>
Age (year)	49.56 ± 10.96	49.8 ± 10.49	0.937
Weight (kg)	72.48 ± 11.48	73.16 ± 10.58	0.770
Height (cm)	161 ± 5.04	161 ± 4.55	0.829
BMI (kg/m <sup>2</sup> )	27.88 ± 4.66	28.29 ± 4.43	0.752
ASA (I/II)	10/15	11/14	0.777
Duration of Surgery (min)	89.4 ± 22.83	88 ± 21.11	0.823
Type of Surgery (1/2/3/4)	12/8/3/2	11/6/4/4	0.828

	ESB Group (n=25)	Control Group (n=25)	<i>p</i>
<b>NRS scores</b>			
1 <sup>st</sup> hour	2 (0.5-3.5)	2 (1-4)	0.937
6 <sup>th</sup> hour	2 (0-2.5)	2 (0-3)	0.386
12 <sup>th</sup> hour	0 (0-2)	1 (0-2)	0.528
24 <sup>th</sup> hour	0 (0-1)	1 (0-1.5)	0.114
<b>Morphine consumption (mg)</b>			
1 <sup>st</sup> hour	1 (0-1)	1 (1-2.5)	<b>0.02</b>
6 <sup>th</sup> hour	2 (1-4)	5 (3.5-7)	<b>&lt;0.001</b>
12 <sup>th</sup> hour	3 (2-5)	10 (8-12)	<b>&lt;0.001</b>
24 <sup>th</sup> hour	5 (3-8.5)	16 (12-19.5)	<b>&lt;0.001</b>

## Conclusion

Our study has shown that US guided ESB has a significant analgesic effect in patients undergoing breast surgery. Further studies, comparing different regional anesthesia techniques are required to search for the optimal analgesia technique for this group of patients.

## REFERANCE

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