

A Prospective Double-Blinded Randomized Control Trial on the PECS II Block in Arthroscopic Rotator Cuff Repair with Open Biceps Tenodesis

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INTRO

- Rotator cuff repairs (RCR) often require an extra incision along the upper medial arm for an open biceps tenodesis, which invades the T2 dermatome.
- Interscalene nerve blocks offer effective post-operative pain control for patients undergoing rotator cuff repair but not for biceps tenodesis
- The addition of a PECS II block to a standard interscalene nerve block catheter in open biceps tenodesis has an unclear benefit.

METHODS

- Patients undergoing arthroscopic RCR with open biceps tenodesis were randomly assigned to two groups, as approved by our IRB.
 - Group A:** 20 mL 0.5% ropivacaine for interscalene block, 15 mL of 0.25% ropivacaine for PECS II block.
 - Group B:** 20 mL 0.5% ropivacaine for interscalene block, 15 mL of 0.9% normal saline for PECS II block.
- Primary outcome: VAS score at 6 hours post-block.
- Secondary outcomes: opioid usage during surgery and up to 6 hours after the block, VAS score on PACU arrival, and pain score and opioid use at 2 weeks postoperatively.

RESULTS

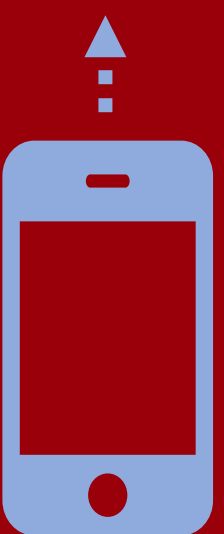
- Primary outcome: VAS score at 6 hours post-block had no statistically significant difference between the two groups at 6 hours post-block ($p=0.19$).
- Secondary outcomes:
 - VAS in PACU significantly lower in Group A ($p=0.027$).
 - Median opioid use at 6 hours post-block significantly lower in Group A ($p = 0.041$).
 - No significant differences in intraop opioid use, 2-week follow-up VAS, or 2-week follow-up opioid use.

DISCUSSION

- The patients receiving a sham block (Group B) had significantly higher VAS scores in PACU and opioid use at 6 hours post-block compared to patients receiving an activated block (Group A).
- PECS 2 blocks may be considered as a postoperative rescue block for intractable pain despite analgesic use in open biceps tenodesis surgeries.



PECS II block has a role in postoperative pain management for open bicep tenodesis repair



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Table 1: Primary and Secondary Outcomes

Variable median $\pm$ IQR	All Patients (n=33)	Group		P-value
		A (Ropivacaine) (n=17)	B (Saline/Sham) (n=16)	
Sex n (%)				
Male	24 (72.73)	11 (35.29)	13 (81.25)	0.44
Female	9 (27.27)	6 (64.71)	3 (18.75)	
Age	60.0 $\pm$ 9.0	57.0 $\pm$ 9.0	60.5 $\pm$ 11.0	0.65
VAS - PACU	0.00 $\pm$ 6.00	0.00 $\pm$ 0.00	5.00 $\pm$ 6.50	0.027*
VAS - 6 Hours	0.00 $\pm$ 2.00	0.00 $\pm$ 0.00	0.00 $\pm$ 3.50	0.19
VAS – 2 Weeks	n=22 0.00 $\pm$ 0.00	n=13 0.00 $\pm$ 0.00	n=9 0.00 $\pm$ 0.00	0.11
Opioid Use – Intraop MME	15.00 $\pm$ 30.00	7.50 $\pm$ 15.00	15.00 $\pm$ 30.00	0.60
Opioid Use – 6 Hours MME	0.00 $\pm$ 15.00	0.00 $\pm$ 7.50	9.50 $\pm$ 22.50	0.041*
Opioid Use – 2 Week MME	n=22 0.00 $\pm$ 0.00	n=13 0.00 $\pm$ 0.00	n=9 0.00 $\pm$ 0.00	0.78

Figure 1: Ultrasound of PECS II Block

