

Keywords: thoracic epidural; Analgesia; Hypotension; Serratus anterior plane block (SAPB)

Introduction

Thoracotomies are notoriously painful in the acute post-operative setting [1]. The gold standard for pain control for the patient who undergoes open thoracic surgery is the placement of a thoracic epidural

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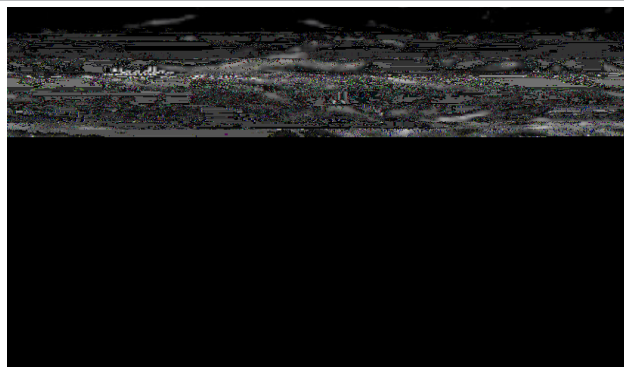


Figure 1: Ultrasound image of the echogenic needle penetrating the serratus anterior muscle and depositing local anesthetic above the fifth rib at the mid axillary line.

Test 1	TEC	SAPB
ASA 2	6	1
ASA 3	28	5
Age (years)	61 ± 21	60.2 ± 23.4years

was converted to morphine equivalents for standardization. Of the two groups, the SAPB group consumed twice as much opioids, 86.5 ± 3.5 while the TEC group consumed an average of 40 ± 4.1 morphine equivalents. The visual analog score was also a measured secondary outcome among the TEC and SAPB group, using the Mann-Whitney U test we deduced that the SAPB group had a median VAS score of 7,

whereas the TEC group's VAS score was 4.5. The results of this study were not statistically significant as the p value was 0.02. Major limitations of this study include a low power, since this retrospective chart review identified only five patients who received a SAPB. This newer ultrasound guided block for analgesia is currently limited secondary to lack of popularity of this new peripheral nerve block.

Discussion and Conclusion

The Serratus Anterior Plane Nerve Block is a safe alternative to treating postoperative acute thoracotomy pain in the setting of any contraindications to thoracic epidural analgesia. While the TEC is superior, the SAPB provides comparable analgesia without the adversity of hypotension. This novel technique has been used for thoracotomies, thorascopies, rib fractures, breast surgery, and shoulder surgery. With stable hemodynamics and comparable pain scores in the early postoperative period, the Serratus Anterior Plane Nerve Block is another technique that can be combined to develop a multimodal approach to analgesia.

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