

Ultrasound Guided Serratus Anterior Plane Block Versus Thoracic Epidural Analgesia for Thoracotomy Pain

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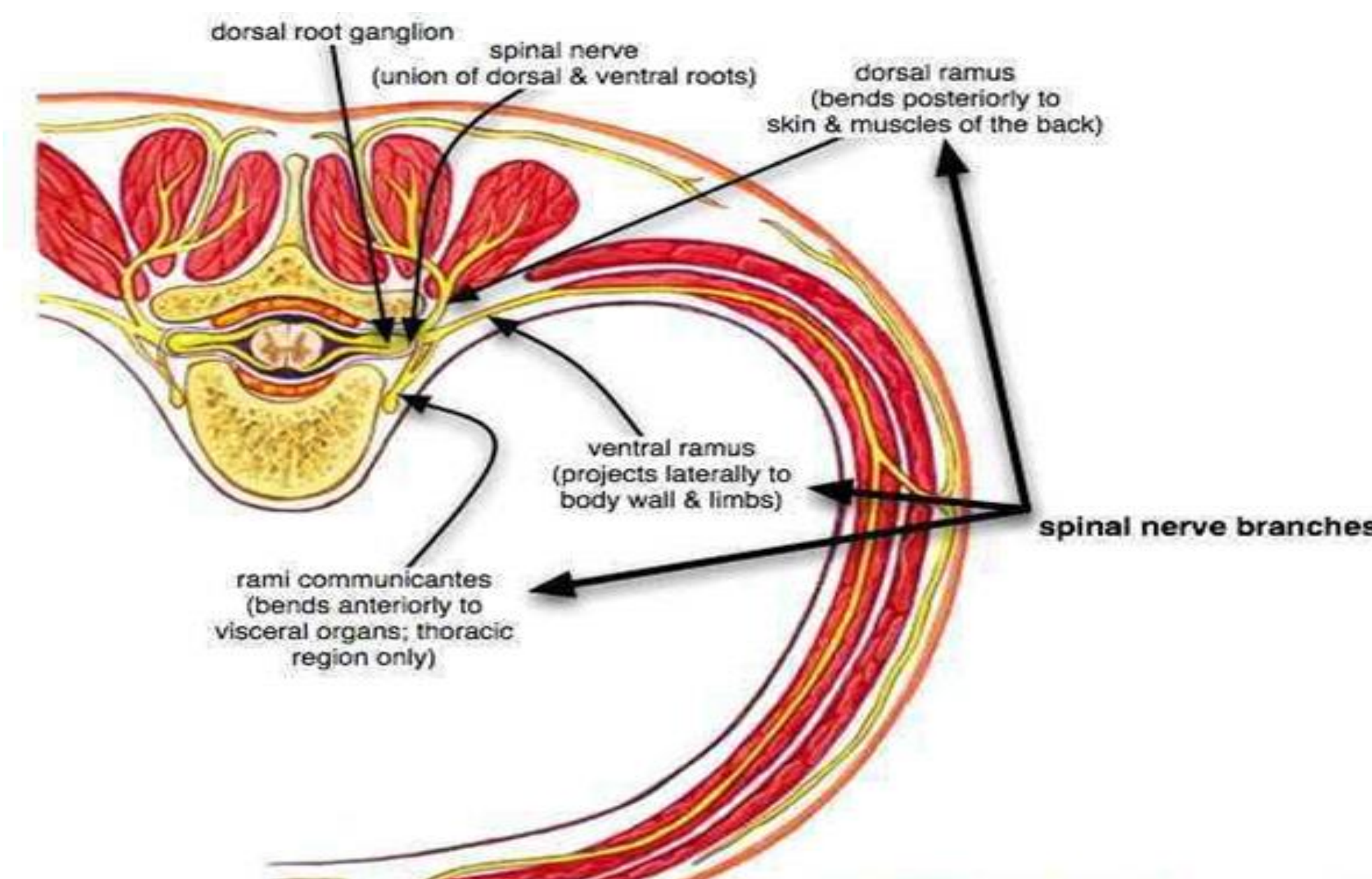
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Objectives

Comparing the analgesic effects of the novel technique; Serratus Anterior Plane block, and the standard thoracic epidural block for acute postoperative pain after thoracotomy.

Introduction

Thoracotomy is one of the most painful surgical incisions. The serratus anterior plane block (SAPB)¹ has been recently developed. Local anesthetic is deposited under ultrasound guidance over the serratus anterior muscle in the mid-axillary line. SAPB guided by ultrasound provides analgesia to a hemithorax by blocking the lateral branches of the intercostal nerves. SAPB has the potential to be an alternative to thoracic epidural analgesia and paravertebral block.



Methods and Materials

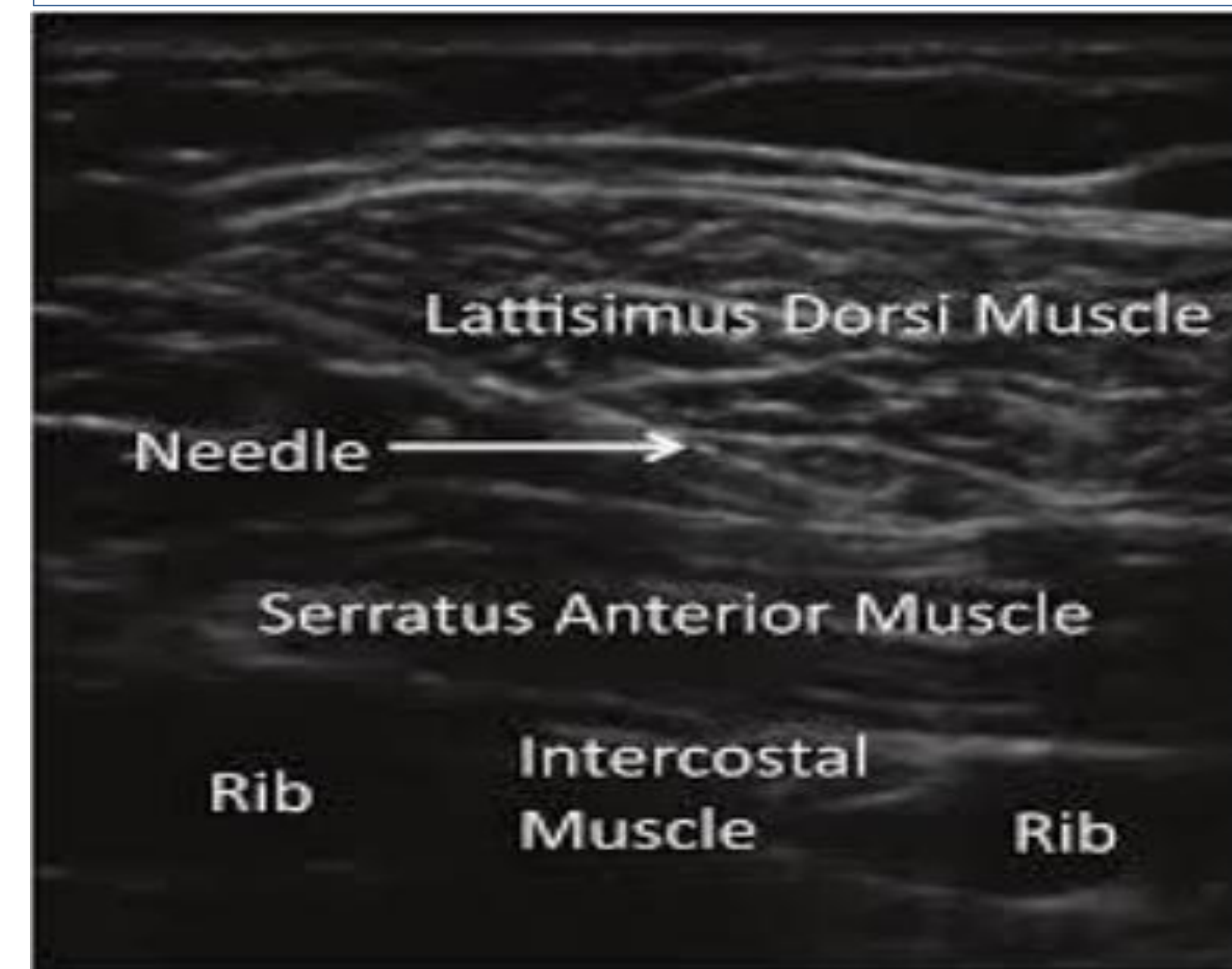
Forty patients undergoing thoracic surgery were enrolled in the study. After surgery twenty patients had Ultrasound Guided Serratus Anterior Plane Block (SAPB). The other 20 patients had thoracic epidural blockade. Both groups levobupivacaine was given as a bolus followed by infusing 5 ml/ hr of 0.125% levobupivacaine through a catheter. In the first 24 hours after surgery, patients were observed for VAS pain scores and rescue analgesic requirements as well as incidence of PONV or any hemodynamic instabilities. Patients were observed every 2 hours for 24 hours starting from the time the patient is able to report his/her VAS.

Results

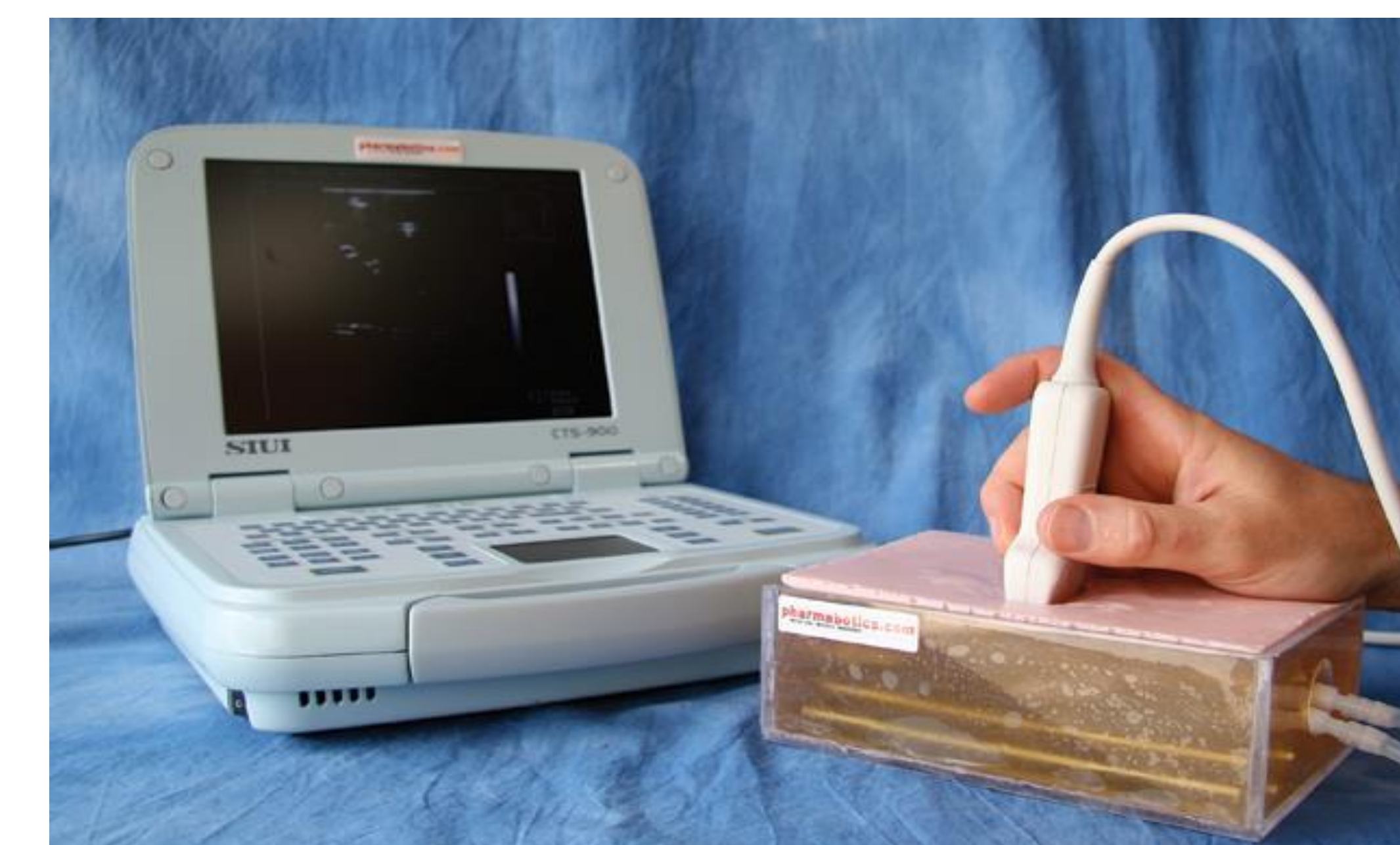
SAPB as well as thorathic epidural blocks (TEB) provided satisfactory VAS pain scores at the end of 24 hours observation and at all observation points 1(1-2) vs 2(1-2), (p=0.35). There was no significant difference between two groups regarding VAS and morphine consumption. There were less Blood pressure and heart rates values in SAPB as compared to TEB patients.

Conclusions

Patients undergoing SAPB for thoracotomy incision showed hemodynamic stability as compared with thoracic epidural group. But both techniques showed no significant difference in VAS score, morphine rescue consumption and/or PONV incidence. We concluded that the SABP is effective new technique that can be used as effective as TEB for postoperative analgesia after thoracotomy.



Ultrasound image for the site of injection.



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References

1. Blanco R, Parras T, McDonnell JG, Prats-Galino A: Serratus plane block: a novel ultrasound-guided thoracic wall nerve block. *Anaesthesia* 2013; 68:1107-13