INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Erector Spinae Block versus Serratus Plane Block for postoperative analgesia in breast and thoracic surgery: A meta-analysis of Randomized controlled Trial

Li, K[1]; Yuan, M[2]; Li, CM[3].

Review question / Objective: **Patients of 18 years or older undergoing breast and thoracic surgery (P); patients received erector spinae plane block (I);patients received serratus plane block (C); analgesic efficacy measured as postoperative pain, use of intra and postoperative opioids, postoperative side-effects, such as nausea and vomiting, and respiratory complications, dizziness, time for chest tube removal and LOS (O); Randomized controlled Trials (S).**
Condition being studied: **Ultrasound-guided erector spinae plane block (ESPB) is a newly defined regional anesthesia technique, first introduced by Forero et al. in 2016, has rapidly gained popularity in different types of surgeries, such as breast, thoracic, abdominal, and lumbar surgery. It is typically performed via deposition of local anesthetic into the fascial plane, beneath the erector spinae muscle at the tip of the transverse process of the vertebra that can blocking the branches of the thoracic and abdominal spinal nerves. The benefits of ESPB have been well established, including reduced postoperative pain scores, decreased opioid requirements, and lower risks of postoperative nausea and vomiting (POVN). Serratus anterior plane block (SAPB) is a type of interfacial plane block that was defined by Blanco in 2013. SAPB blocks the lateral branches of the intercostal nerves (T2–T9) so that it can provide analgesia in the chest wall. It has been reported that SAPB may be used to provide postoperative analgesia after thoracoscopic, breast surgery.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 December 2021 and was last updated on 19 December 2021 (registration number INPLASY2021120085).

INTRODUCTION

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METHODS

Participant or population: Patients of 18 years or older undergoing breast and thoracic surgery.

Intervention: Patients received erector spinae plane block

Comparator: Patients received serratus plane block.

Study designs to be included: Randomized controlled Trials.

Eligibility criteria: 1. Studies of ESPB compared with SAPB were included; 2. There were no restrictions on the types of surgeries in this study; 3. Outcomes included postoperative pain intensity and occurrence of adverse events; 4. Studies included should be randomized controlled trials (RCTs); 5. There was no language limitation.

Information sources: We systematically searched PubMed, Embase, the Cochrane Library, ClinicalTrials.gov register, China National Knowledge Infrastructure (CNKI), and Wanfang Database from inception to March 2020 for RCTs meeting the listed inclusion criteria.

Main outcome(s): Postoperative opioid consumption.

Quality assessment / Risk of bias analysis: Methodological quality assessment was independently assessed by two authors, with any disagreements resolved by a third author, according to the Cochrane Risk of Bias Tool and the Jadad score.

Strategy of data synthesis: The literature search and screening were identified independently by two investigators , and any disagreements in opinions were resolved and discussed with a third reviewer after search.

Subgroup analysis: None.

Sensitivity analysis: None.

Country(ies) involved: China.

Keywords: Erector Spinae Block, Serratus Plane Block, postoperative analgesia, breast and thoracic surgery, meta-analysis.

Contributions of each author:
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Author 3 - Chun-mei Li.