INPLASY PROTOCOL

Corresponding author:
Xu Fangsheng

1255125543@qq.com

Author Affiliation:
The Affiliated Heping Hospital of Changzhi Medical College.

Support: None.

Review Stage at time of this submission: The review has not yet started.

Conflicts of interest:
None declared.

Efficacy and Safety of deep verses superficial serratus plane block in analgesia for breast and thoracic surgery: A Meta-analysis of Randomized Controlled Trials

Xu, F[1]; Cui, Y[2]; Li, C[3]; Guo, J[4]; Long, X[5].

Review question / Objective: Whether superfacial verses deep serratus plane block for breast and thoracic surgeries demonstated non-inferiority in terms of analgesic efficacy.
Condition being studied: The serratus anterior plane block (SAPB) is a novel method that provides lateral chest wall analgesia. There are 2 methods of SAPB; deep and superficial SAPB. Althouth each of these methods has been demonstrated to provide effective perioperative analgesia in thoracic surgery, the optimal plane has always been controversial.

INTRODUCTION

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METHODS

Participant or population: Patients underging breast or thoracic surgery.

Intervention: Superficial serratus plane block.

Comparator: Deep serratus plane block.

Study designs to be included: RCT.

Eligibility criteria: The type of study must be a radomized controlled trial.

Information sources: pubmed, embase, cochrane, web of science, cnki, wangfang, VIP.

Main outcome(s): Visual analogue scores (VAS,raning from 0 to 10; 0 corresponding to no pain and 10 repressenting worst imaginable pain) at 6,12,24 and 48 hours postoperatively.

Additional outcome(s): The total rescue analgesic consumption in the 24-hour postoperative period; (2) time of first rescue analgesia within 24 hours after surgery. The adverse events.

Quality assessment / Risk of bias analysis: The methodological quality of the included RCTs was reviewed by two reviewers (Xu fangsheng and Cui yuanyuan) independently. The Cochrane Collaboration's risk of bias assessment tool was used. They evaluated the quality of each article from seven domains. If there were some disagreements, they discussed the disagreements to reach consensus or the issue was decided by two other reviewers (Li chunyu and Guo jiaing). Finally, the low-bias, high-bias, and unclear judgments were obtained.

Strategy of data synthesis: Review Manager 5.3 was used for statistical analysis. In the presence of heterogeneity, a random effects model was chosen to combine the data; in the absence of heterogeneity, a fixed effects model was chosen to combine the data.Total rescue analgesic consumption and time of the first rescue analgesia were expressed by weight mean difference (WMD) and its 95% confidence interval (CI). Dichotomous outcomes were expressed by risk ratio (RR) and its 95%CI.The continuity correction was applied for zero event studies.P value<0.05 was considered statistically significant. VAS scores at different time after surgery are reported with 99%CI(αcorrected= 0.01)because a Bonferroni correction was applied.

Subgroup analysis: We performed subgroup analyses by the pre-specified subgroup:type of surgery, type of local anesthetics or dose.

Sensitivity analysis: sensitivity analysis was conducted by excluding the study that the quality was rated as "high risk".

Country(ies) involved: China.

Keywords: Serratus plane block.

Contributions of each author:
Author 1 - Xu Fangsheng.
Email: 1255125543@qq.com
Author 2 - Cui Yuanyuan.
Author 3 - Li Chunyu.
Author 4 - Guo Jianing.
Author 5 - Long Xuecheng.