INPLASY PROTOCOL

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Conflicts of interest:
None.

High-dose versus low-dose local anaesthetic for transversus abdominis plane block after bariatric surgery: a systematic review and meta-analysis

Kang, X[1]; Zhang, JQ[2].

Review question / Objective: **Whether transversus abdominis plane block (TAP) blocks for bariatric surgery with low-dose (LD) local anaesthetics (LA) demonstrated non-inferiority in terms of analgesic efficacy, compared with high-dose (HD) local anaesthetics.**
Condition being studied: **While TAP has been employed to relieve pain after different abdominal surgery. However, the evidence is inconsistent. The optimal LA dose for TAP block is not clear. In the present systematic review and meta-analysis, our purpose is that whether TAP blocks for bariatric surgery with LD LA demonstrated non-inferiority in terms of analgesic efficacy, compared with HD LA.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 December 2020 and was last updated on 05 December 2020 (registration number INPLASY2020120028).

INTRODUCTION

Review question / Objective: **Whether transversus abdominis plane block (TAP) blocks for bariatric surgery with low-dose (LD) local anaesthetics (LA) demonstrated non-inferiority in terms of analgesic efficacy, compared with high-dose (HD) local anaesthetics**

Condition being studied: **While TAP has been employed to relieve pain after different abdominal surgery. However, the evidence is inconsistent. The optimal LA**

dose for TAP block is not clear. In the present systematic review and meta-analysis, our purpose is that whether TAP blocks for bariatric surgery with LD LA demonstrated non-inferiority in terms of analgesic efficacy, compared with HD LA.

METHODS

Participant or population: Patients aged 18 years and older undergoing bariatric surgery.

Intervention: Either HD or LD (or both) TAP blocks.

Comparator: No block, placebo block.

Study designs to be included: Prospective, randomised clinical trials.

Eligibility criteria: The study will include prosoective randomised clinical trials of TAP block for bariatric surgery.

Information sources: We plan to search PubMed, Web of Science, Embase and Cochrane Library from inception to 1 December 2020. To ensure all relevant articles are located, we will hand-search the reference lists of all included studies, and of relevant review articles and reports.

Main outcome(s): The primary outcome is the postoperative opioid consumption.

Quality assessment / Risk of bias analysis: The Cochrane Collaboration Risk of Bias tool will be used to assess the risk of bias. Two researchers will independently assess the risk of bias according to sequence generation, allocation concealment, blinding, incomplete outcome data, selective reporting and other. All disagreements will be resolved by a third reviewer.

Strategy of data synthesis: We will use RevMan 5.3 (Cochrane Collaboration, Oxford, UK) and Stata 16.0 software (College Station, TX, USA) to analyze the data from the evaluated articles. Pooled odds ratio (OR) and 95% confidence intervals (CIs) will be used to express the results for dichotomous outcomes. The mean difference (MD) with associated 95% confidence intervals (CIs) was calculated for continuous outcomes. Cochran-based I^2 test will be used to assess the heterogeneity among studies. As if I^2 >50%, a random-effects model will be applied, otherwise a fixed-effect model will be used for the analyses.

Subgroup analysis: We will perform subgroup analyses according to different type of bariatric surgery.

Sensibility analysis: Sensitivity analysis was performed to test the stability of the results. We removed one study at once time and assessed its impact on OR.

Language: English.

Country(ies) involved: China.

Keywords: bariatric surgery, TAP.

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