INPLASY PROTOCOL

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Support: **None.**

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

Conflicts of interest:
None declared.

The analgesic effectiveness of ultrasound-guided fascia iliaca compartment block for total hip arthroplasty: A protocol for systematic review

He, J[1]; Ma, L[2]; Zhou, F[3]; Jiang, H[4].

Review question / Objective: **This systematic review aims to evaluate the effectiveness of ultrasound-guided fascia iliaca compartment block for total hip arthroplasty.**
Condition being studied: **Total hip arthroplasty (THA) is a common surgical treatment for end-stage hip osteoarthritis and femoral neck fractures. In US, more than one million patients undergo THA treatment every year. Limited evidence suggests that Fascia iliaca compartment block relieve pain fast with fewer adverse effects.**
Information sources: **Relevant studied will be searched in the following electronic databases: PubMed, EMBASE, Cochrane Library, CINAHL, EBSCO, China Knowledge Resource Integrated Database, Weipu Database for Chinese Technical Periodicals, Sinomed, and Wanfang Database. The search terms include Fascia iliaca block, Fascia iliaca compartment block, total hip replacement, total hip arthroplast and randomized controlled trials (RCTs).**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 04 December 2021 and was last updated on 04 December 2021 (registration number INPLASY2021120026).

INTRODUCTION

Review question / Objective: **This systematic review aims to evaluate the effectiveness of ultrasound-guided fascia iliaca compartment block for total hip arthroplasty.**

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METHODS

Participant or population: Participants with total hip arthroplasty accept the treatment of ultrasound-guided fascia iliaca compartment blocks. There are no limits to research subjects' age, gender, condition duration.

Intervention: The experimental group will be treated with ultrasound-guided fascia iliaca compartment blocks.

Comparator: The control group will adopt non-intervention, placebo, paracetamol, nonsteroidal anti-inflammatory drugs (NSAIDs), opioids, or other nerve blockades directly.

Study designs to be included: Only randomized controlled clinical trials (RCTs) related to the effects of ultrasound-guided fascia iliaca compartment blocks will be included in this systematic review. Trials published in the form of dissertations will be also selected as eligible studies.

Eligibility criteria: Interventions will include any type of ultrasound-guided fascia iliaca compartment blocks for total hip arthroplasty.

Information sources: Relevant studied will be searched in the following electronic databases: PubMed, EMBASE, Cochrane Library, CINAHL, EBSCO, China Knowledge Resource Integrated Database, Weipu Database for Chinese Technical Periodicals, Sinomed, and Wanfang Database. The search terms include Fascia iliaca block, Fascia iliaca compartment block, total hip replacement, total hip arthroplast and randomized controlled trials (RCTs).

Main outcome(s): The primary outcome of interest includes visual analogue scale (VAS), numeric rating scale (NRS), additional analgesic usage, incidence and severity of delirium, adverse effects, damage to structures surrounding the block site, allergic reactions, length of hospitalization, and mortality.

Quality assessment / Risk of bias analysis: We will use the Cochrane Collaboration's tool which is recommended by the Cochrane Reviewer's Handbook to assess risk of bias for quality assessment of the included studies. The studies will be graded based on: (i) random sequence generation; (ii) allocation concealment; (iii) blinding; (iv) incomplete outcome data; (v) selective outcome reporting; (vi) other sources of bias.

Strategy of data synthesis: Review Manager Version 5.3 for Windows will be used for data combination and analysis. when I2 value is less than 50%, fixed effect model will be selected to pool data. Otherwise, we will choose the random effect model. And the subgroup analysis will be carried out to explorer the causes of heterogeneity.

Subgroup analysis: If the meta-analysis shows significant heterogeneity in the studies, we will perform a subgroup analysis based on type of intervention, controls, and outcome measurements.

Sensitivity analysis: According to the recommendation of the Cochrane Handbook, sensitivity analysis will be conducted to test the quality of research. The stability of the conclusions can be tested by re-analyzing the conclusions by inputting missing data and changing the type of research.

Language: Without any language or publication status restrictions.

Country(ies) involved: China.

Other relevant information: When data are missing, we will look for the reason. Then, we will contact the corresponding author to obtain and verify the data if possible. If this does not work, we will only analyze the available data.

Keywords: total hip arthroplasty, ultrasound-guided fascia iliaca

compartment block, protocol, systematic review.

Contributions of each author:

Author 1 - Jie He - The author drafted the manuscript.
Author 2 - Lin Ma - The author provided statistical expertise.
Author 3 - Feng Zhou - The author contributed to the development of the selection criteria, and the risk of bias assessment strategy.
Author 4 - Hongbo Jiang - The author contributed to the development of the selection criteria, and the risk of bias assessment strategy.