

# INPLASY PROTOCOL

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**Review Stage at time of this submission:** Formal screening of search results against eligibility criteria.

**Conflicts of interest:**  
None.

## INTRODUCTION

**Review question / Objective:** To determine the effectiveness and safety of retrograde intrarenal surgery (RIRS) under regional anesthesia (RA) vs general anesthesia (GA).

**Condition being studied:** To determine the effectiveness and safety of retrograde

## Regional versus General Anesthesia for Retrograde Intrarenal Surgery: A Systematic Review and Meta-Analysis

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**Information sources:** PubMed, EMBASE, Web of Science, Cochrane Library, ClinicalTrial.gov and WHO International Clinical Trials Registry.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 April 2020 and was last updated on 23 April 2020 (registration number INPLASY202040159).

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## METHODS

**Participant or population:** Patients who were diagnosed with non-obstructing upper urinary tract stones.

**Intervention:** Retrograde intrarenal surgery.

**Comparator:** Regional anesthesia (RA) vs general anesthesia (GA).

**Study designs to be included:** Case-control trials and randomized controlled trials.

**Eligibility criteria:** (1) studies of patients who were diagnosed with non-obstructing upper urinary tract stones; (2) evaluating the safety and effectiveness of RIRS under RA vs GA; (3) reporting on  $\geq 1$  of the following variables: SFR, operation time, postoperative length of stay, postoperative 1st day visual analog scale (VAS) score and complications; (4) studies with 1–3 months of follow-up after the procedure; (5) access to the full-text.

**Information sources:** PubMed, EMBASE, Web of Science, Cochrane Library, ClinicalTrial.gov and WHO International Clinical Trials Registry.

**Main outcome(s):** Stone free rate (the definition of stone free rate was complete stone clearance or maximum residual fragment smaller than 4 mm); operative time; postoperative hospital stay; postoperative 1st day VAS score; complication rates (include intraoperative complication rates, postoperative grade I Clavien complication rates, postoperative grade II Clavien complication rates and postoperative grade III-IV Clavien complication rates).

**Quality assessment / Risk of bias analysis:** We evaluated the methodological quality of the eligible case-control trials (CCTs) on the basis of Newcastle Ottawa Scale (NOS). For the randomized controlled trials (RCTs), we used Risk-of-bias table, which is recommended by the Cochrane Handbook 5.3.

**Strategy of data synthesis:** We utilized Review Manager Version 5.3 software to perform analysis. Dichotomous variables were pooled using odds ratio (OR) and 95% confidence interval (CI), and continuous variables were presented by weighted mean difference (MD) and 95% CI.

**Subgroup analysis:** We conducted a subgroup analysis that contains VAS in overnight and outpatient groups to evaluate the potential effect of overnight therapy.

**Sensitivity analysis:** Sensitivity analysis was conducted using a single-item removal method.

**Country(ies) involved:** China.

**Keywords:** Regional anesthesia, General anesthesia, Retrograde intrarenal surgery.