INPLASY PROTOCOL

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Nothing to disclose and there is no conflict of interest.

Efficiency and Safety Comparison between Single Use Ureteroscope and Reusable Ureteroscope: A systematic review and meta-analysis

Ma, Y[1]; Jian, Z[2]; Jin, X[3]; Li, H[4]; Wang, K[5].

Review question / Objective: **For single-use flexible URS, there is still a lack of high-level evidence to compare its safety and efficiency with that of reusable flexible URS. Therefore, the purpose of this study is to collect published data for meta-analysis of efficiency and safety between two types of scopes.**
Condition being studied: **Since flexible ureteroscope is a relatively expensive instrument in the urology department, many cost-related studies have been published to help users of reusable ureteroscope reduce costs, to solve cost problem single-use ureteroscopy has been reported but its safety and efficiency is still uncertain.**
Information sources: **We searched Pubmed, Embase, Web of Science and Cochrane Library to identify relevant studies.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 26 April 2020 and was last updated on 26 April 2020 (registration number INPLASY202040187).

INTRODUCTION

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METHODS

Search strategy: We searched Pubmed, Embase, Web of Science and Cochrane Library to identify relevant studies. Keywords used in the searching strategies included "single-use ureteroscope", "disposable ureteroscope". The reference list of every candidate publication was manually screened by authors to find possible missing studies in the database searching procedure.

Participant or population: Patients with urinary stones could be treated with ureteroscopic lithotripsy or any upper urinary tract disease should be diagnosed with ureteroscopy.

Intervention: Intervention in the included studies should be only ureteroscopic treatment.

Comparator: Comparisons should be carried out between sufURS and rfURS.

Study designs to be included: Prospective designed studies.

Eligibility criteria: Exclusion criteria were as follow: previously published reviews, meta-analysis, letters, comments and conference abstract were excluded.

Information sources: We searched Pubmed, Embase, Web of Science and Cochrane Library to identify relevant studies.

Main outcome(s): Basic outcomes information such as success rate and postoperative complications should be offered.

Quality assessment / Risk of bias analysis: For included RCTs, quality evaluations were conducted based on Cochrane bias risk evaluation tools offered by Revman 5.3 (The Cochrane Collaboration). All included non-randomized studies were evaluated by the Newcastle-Ottawa Scale (NOS) scale and the evaluation procedure was performed by two authors (YCM, and ZYJ) independently, any disagreement should be re-evaluated by KJW.

Strategy of data synthesis: The number of stone-free patients, the number of patients with postoperative complications, and the total number of patients were extracted from studies. Data synthesis procedures were executed in Stata 15.0 environment (Stata Corporation, College Station TX, USA) with the help of Revman 5.3 software.

Subgroup analysis: Subgroup analysis was implemented based on many variables such as:study design, stone-free definition, publication year, study countries.

Sensibility analysis: Sensitivity analysis was used to test the stability of meta-analysis results by omitting studies one by one.

Country(ies) involved: China.

Keywords: Single-use ureteroscope; reusable ureteroscope; ureteroscopy; meta-analysis.

Contributions of each author:
Author 1 - Yucheng Ma - Project development, Data Collection, Data analysis, Manuscript writing.
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