

INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Efficacy and Safety of Ultrasound-guided Sclerotherapy with Lauromacrogol and Anhydrous alcohol for Adult Simple Renal Cysts: a Meta-analysis

Zhang, K¹;Tang, ZC²; Yi, ZX³; Chen, Y⁴; Liu, ZM⁵; Bai, YH⁶.

Review question / Objective: The objective of this study was to evaluate the efficacy and safety of ultrasound-guided percutaneous lauromacrogol sclerotherapy for simple renal cysts. The analysis items included cyst volume reduction rate and complication rate.

Condition being studied: Several strategies are available for the treatment of symptomatic simple renal cysts, however, there is no the most recommended treatment strategies. One of these strategies, ultrasound-guided percutaneous lauromacrogol sclerotherapy, is expected to become the most recommended treatment strategy.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 10 November 2022 and was last updated on 17 December 2022 (registration number INPLASY2022110045).

INTRODUCTION

Review question / Objective: The objective of this study was to evaluate the efficacy and safety of ultrasound-guided percutaneous lauromacrogol sclerotherapy for simple renal cysts. The analysis items included cyst volume reduction rate and complication rate.

Condition being studied: Several strategies are available for the treatment of symptomatic simple renal cysts, however, there is no the most recommended treatment strategies. One of these strategies, ultrasound-guided percutaneous lauromacrogol sclerotherapy, is expected to become the most recommended treatment strategy.

METHODS

Participant or population: The included population includes patients diagnosed with simple renal cysts based on international or national standards, regardless of race, age, gender, time of onset, and source of cases.

Intervention: The intervention was ultrasound-guided percutaneous lauromacrogol sclerotherapy.

Comparator: The control group included laparoscopic deroofng, ultrasound-guided percutaneous anhydrous ethanol sclerotherapy.

Study designs to be included: Retrospective studies or randomized controlled trials (RCT) of ultrasound-guided percutaneous lauromacrogol sclerotherapy, ultrasound-guided percutaneous anhydrous ethanol sclerotherapy and laparoscopic deroofng for the treatment of simple renal cyst. The language of any study is limited to English and Chinese.

Eligibility criteria: Repeated publications, other overviews, Mesh meta-analysis, narrative reviews, and conference abstracts were excluded.

Information sources: Pubmed, Cochrane Library, Embase, Wanfang Database, VIP, China National Knowledge Infrastructure (CNKI), and Chinese Biological Medicine(CBM).

Main outcome(s): Cyst volume reduction rate, Complication rate.

Quality assessment / Risk of bias analysis: The extent of publication bias was explored by funnel plots and tested using Egger's test. Moreover, two of the authors used the ROBINS-I tool for assessing the risk of bias in non-randomized studies. Specifically, the tool allowed to assess the following domains of bias: bias due to confounding; bias in selection of participants into the study; bias in classification of interventions; bias due to deviations from intended interventions; bias due to missing data;

bias in measurement of outcomes; bias in selection of the reported result. Finally, the level of evidence was assessed according to criteria from the Oxford Centre for Evidence-Based Medicine (OCEBM) .

Strategy of data synthesis: The extracted data information includes: the general information of the study, including the authors, Year of publication, Country, Study type, Follow-up time, The mean age of the patients, Ablation method, Cyst volume reduction rate, Initial nodule volume ,Complications of include both major and minor complications, etc.

Subgroup analysis: No.

Sensitivity analysis: No.

Country(ies) involved: China.

Keywords: Renal cysts; Percutaneous aspiration; Sclerotherapy; Ultrasonic guidance; Lauromacrogol.

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