The efficacy and safety of ultrasound-guided lauromacrogol sclerotherapy for 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.

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 deroofing, 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 deroofing 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.

**Contributions of each author:**
Author 1 - Zhang Ke.
Email: zhangke_18@126.com
Author 2 - Tang ZhongCai.
Author 3 - Yi ZhaoXiong.
Author 4 - Chen Yin.
Author 5 - Liu ZhengMin.
Author 6 - Bai YanHong.