

Oral Dissolution Therapy of Uric Acid Stones: A Systematic Review

INPLASY202450057

doi: 10.37766/inplasy2024.5.0057

Received: 13 May 2024

Published: 13 May 2024

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202450057

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 May 2024 and was last updated on 13 May 2024.

INTRODUCTION

Review question / Objective What are current oral dissolution therapies available for the management of uric acid stones?

Condition being studied Nephrolithiasis/ Urolithiasis also known as kidney stones.

METHODS

Search strategy The databases searched included Embase, Scopus, PubMed, and Cochrane library. The search terms included: 'uric acid kidney stones', 'uric acid kidney stone treatment', 'uric acid nephrolithiasis', 'uric acid nephrolithiasis treatment', 'citrate treatment for uric acid kidney stones', 'sodium bicarbonate treatment for uric acid stones', 'urine alkalization and uric acid stones', 'potassium citrate and uric acid stones',

'low purine diet and uric acid stones', 'allopurinol and uric acid stones', 'hydration and uric acid stones'. Terms were combined using Boolean operators.

Participant or population All human adults.

Intervention Oral dissolution therapy.

Comparator N/A.

Study designs to be included Randomized control trial, retrospective/prospective observational.

Eligibility criteria Research was limited to studies done in English on patients 18 years old or older who were diagnosed with uric acid kidney stones and treated with ODT.

Information sources Embase, Scopus, PubMed, and Cochrane library.

Main outcome(s) Dissolution of kidney stone.

Quality assessment / Risk of bias analysis

-Cochrane Risk of Bias Tool (RoB 2)
-Risk of Bias in Non-randomized Studies-of Interventions (ROBINS-I).

Strategy of data synthesis Abstracts reviewed by 2 independent authors for screening. Full texts of selected abstracts will be reviewed by 2 reviewers and senior author.

Subgroup analysis N/A.

Sensitivity analysis N/A.

Language restriction English.

Country(ies) involved United States (University of California Los Angeles, David Geffen School of Medicine).

Keywords Uric acid; urolithiasis; oral dissolution therapy; potassium citrate; sodium bicarbonate.

Contributions of each author

Author 1 - Ava Mousavi - This author drafted the manuscript.

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