

# INPLASY PROTOCOL

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**Review Stage at time of this  
submission:** The review has  
not yet started.

**Conflicts of interest:**  
None.

## INTRODUCTION

**Review question / Objective:** A large number of patients will experience pruritus after uremia. Medicine is the preferred treatment for many doctors, but the effectiveness and safety of different medicines for uremia pruritus has not yet

## Effectiveness and safety of different medicines for Uremia pruritus: A systematic review and network meta-analysis protocol

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**Review question / Objective:** A large number of patients will experience pruritus after uremia. Medicine is the preferred treatment for many doctors, but the effectiveness and safety of different medicines for uremia pruritus has not yet been comprehensively compared, based on network meta-analysis. **Condition being studied:** High-quality methodological articles are critical to the credibility of the results, so we included only RCTs with a variety of drugs for urinalysis. Since all patients with end-stage uremia are undergoing hemodialysis, there is no requirement for hemodialysis mode and flux. On the basis of hemodialysis, combined with various drugs, drugs are only limited to Gabapentin, Pregabalin, Tacrolimus, and Ondancetron. The intervention measures of the control group should include placebo or blank control.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 September 2020 and was last updated on 29 September 2020 (registration number INPLASY202090103).

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## METHODS

**Participant or population:** In all adult patients diagnosed with uremic pruritus, the diagnostic criteria include uremic and pruritus and exclude other causes of pruritus, such as skin diseases, mosquito bites, etc.

**Intervention:** The interventions were combined with a drug for uremic pruritus that was restricted to Gabapentin, Pregabalin, Tacrolimus, Ondancetron, and of course blank control and placebo. There was no restriction on basic treatment between the test and control groups, but there was no difference between the two groups. If there are multiple groups and two of them meet the above requirements, they should also be included in the study.

**Comparator:** The interventions were combined with a drug for uremic pruritus that was restricted to Gabapentin, Pregabalin, Tacrolimus, Ondancetron, and of course blank control and placebo. There was no restriction on basic treatment between the test and control groups, but there was no difference between the two groups. If there are multiple groups and two of them meet the above requirements, they should also be included in the study.

**Study designs to be included:** High-quality methodological articles are critical to the credibility of the results, so we included only RCTs with a variety of drugs for urinalysis. Since all patients with end-stage uremia are undergoing hemodialysis, there is no requirement for hemodialysis mode and flux. On the basis of hemodialysis, combined with various drugs, drugs are only limited to Gabapentin, Pregabalin, Tacrolimus, and Ondancetron.

**Eligibility criteria:** High-quality methodological articles are critical to the credibility of the results, so we included only RCTs with a variety of drugs for urinalysis. Since all patients with end-stage uremia are undergoing hemodialysis, there is no requirement for hemodialysis mode and flux. On the basis of hemodialysis, combined with various drugs, drugs are only limited to Gabapentin, Pregabalin, Tacrolimus, and Ondancetron. The intervention measures of the control group should include placebo or blank control.

**Information sources:** PubMed, Cochrane Library, Embase, Web of Science, Chinese National Knowledge Infrastructure(CNKI), Chinese Biomedical Literature Database (CBM) and Wanfang Database (WF).

**Main outcome(s):** The visual analog scale (VAS).

**Additional outcome(s):** 1) the numeric rating scale (NRS) 2) the dermatology QOL index (DLQI) 3)The incidence rate of adverse events.

**Quality assessment / Risk of bias analysis:** The two authors (YT and YSF) evaluated the article methodology of inclusive trials independently, by the Cochrane collaboration "Bias risk" tool sequences generated from six aspects of allocation concealment, blind (or mask), incomplete data evaluation, evaluation reports and other sources of bias selective results. Finally, for each items, we made ranking of "Low-risk bias", "High-risk bias" and "Unclear" based on the Cochrane collaboration "bias risk" tool.

**Strategy of data synthesis:** 2.7.5 Pairwise meta-analysis If there is a direct comparison between the experimental interventions included in the data (TCM versus TCM, TCM versus placebo), the Stata14.0 will be used for Pairwise meta-analysis based on a random-effects model. 2.7.6 Network meta-analysis Two team members (YT and YSF) used statistical software - Stata (version 14.0, Stata Corporation, College Station, Texas, the

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United States) for analysis. A random effects model was used for network meta-analysis to compare the variables between different interventions. By comparing Surface Under the Cumulative Ranking Curve (SUCRA), the optimum intervention measures were determined. The range of SUCRA is 0-100%, the higher of the cumulative ranking curve means the better of the efficacy

**Subgroup analysis:** If the analysis shows significant heterogeneity, then the root cause will be analyzed according to the PICOS principle, and the STATA 14.0 will be used for subgroup analysis.

**Sensibility analysis:** We will evaluate the robustness of the meta-analysis results through sensitivity analysis, and exclude Figure 1. Flow diagram of study selection process. Xiao et al. *Medicine* (2020) Vol:No Medicine 4 MD-D-20-06911; Total nos of Pages: 8; MD-D-20-06911 such as small-sample trials and low-quality trials to explore the impact of trial quality on efficacy estimates. In addition, we will conduct a second meta-analysis based on the results of the sensitivity analysis, summarize in tables and discuss.

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

**Keywords:** Uremia pruritus, network meta-analysis, protocol.

**Contributions of each author:**

Author 1 - Maohong Wang - conceived this study.

Author 2 - Shifan Yan - completed the project, search strategy, research selection, bias risk assessment, data extraction, data analysis and evidence quality assessment.