INPLASY PROTOCOL

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None.

Meta analysis of traditional Chinese medicine combined with cyclophosphamide in the treatment of adult refractory nephrotic syndrome

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Review question / Objective: **The purpose of this review is to evaluate the efficacy and safety of traditional Chinese medicine combined with cyclophosphamide (CTX) in the treatment of adult refractory nephrotic syndrome using evidence-based medicine.**
Condition being studied: **Refractory nephrotic syndrome (RNS) refers to those who have had more than 8 weeks of regularity, ineffective hormonal therapy, hormone dependence, drug resistance, repeated attacks after relapse, or ineffective relapse therapy. Modern medicine often uses hormonal and cytotoxic drugs for treatment. Although the use of these drugs has achieved a certain effect, the effect is still not satisfactory, and it has a large number of side effects and a high recurrence rate. A large number of clinical studies have shown that Chinese medicine can reduce the proteinuria of RNS, reduce the incidence of adverse reactions, increase plasma albumin, improve renal function, and at the same time improve the body's immunity to prevent infection.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 06 May 2020 and was last updated on 06 May 2020 (registration number INPLASY202050020).

INTRODUCTION

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METHODS

Participant or population: Inclusion: Patients diagnosed with refractory nephrotic syndrome. It meets the diagnostic criteria of nephrotic syndrome: ① plasma albumin 3.5 g / d; ③ hyperlipidemia; ④ high edema. At the same time, anyone with any of the following: ① partial effects of hormones: standard glucocorticoid therapy reduces urine protein levels, but the amount of urine protein at 24 h is ≥1.73 m2; ② hormone dependence: decreased urinary protein after glucocorticoid therapy, and glucocorticoid Relapse within 1 month after reduction or withdrawal, long-term glucocorticoids are required; ③ Hormone resistance: standard glucocorticoid therapy cannot reduce urine protein or although it is reduced but still does not leave the nephrotic syndrome; ④ relapse: after treatment remission Recurrence> 2 times within 6 months, or ≥ 3 times within 12 months. Excluded: secondary nephrotic syndrome lupus nephritis, purpuric nephritis, diabetic nephropathy, hypertensive nephropathy, hepatitis B-related nephritis, nephrotic syndrome caused by renal amyloidosis, polycystic kidney disease, inherited nephropathy, etc.

Intervention: The experimental group was treated with traditional Chinese medicine combined with cyclophosphamide and glucocorticoid.

Comparator: The control group was treated with cyclophosphamide and glucocorticoid.

Study designs to be included: Only randomized controlled trial will be included.

Eligibility criteria: Inclusion criteria: (1) Type of literature study: the application of Chinese medicine combined with CTX in the treatment of RCT for refractory nephrotic syndrome. (2) Research subjects: clinically diagnosed patients with RNS and age ≥18 years old. (3) Intervention measures: The experimental group is treated with traditional Chinese medicine combined with glucocorticoid (GC) and CTX, and the control group is treated with glucocorticoid (GC) and CTX. The course of treatment is not limited.

Information sources: The computer searches CNKI, WAN-Fang Data, VIP, CBM, Pubmed, EMbase, Cochrane Library and other databases. The search time is from 2005 to May 2020, and it is supplemented by the manual search method. Chinese search terms are: refractory nephrotic syndrome, hormone-resistant nephrotic syndrome, relapsed nephrotic syndrome, hormone-dependent nephrotic syndrome, cyclophosphamide, randomized control, random. The English search terms are: refractory nephrotic syndrome (RNS), hormonal resistance nephrotic syndrome, relapsed nephrotic syndrome, hormone-dependent nephrotic syndrome, Cyclophosphamide (CTX), Random Control, Random (RCT).

Main outcome(s): ① 24h urine protein quantity ② albumin(ALB).

Additional outcome(s): ① total effective rate ② complete remission rate ③total cholesterol (TC) ④ Serum creatinine concentration (Scr) ⑤recurrence rate ⑥ adverse reactions: abnormal liver function, infection, Cushing's syndrome, gastrointestinal reactions, leukopenia, abnormal kidney function, other adverse reactions (hair loss, oliguria, acne, waist and knee soreness, etc.).

Quality assessment / Risk of bias analysis: The Cochrane Collaboration Network bias risk assessment tool was used to evaluate the quality of the included literature independently by two researchers. The main contents include: ① random allocation method ② blind method (including the tester and test object, test data processor) ③ allocation Scheme hiding ④ Selectively report research results ⑤ Completeness of result data ⑥ Other sources of bias.

Strategy of data synthesis: (1) Heterogeneity test: The heterogeneity between the included studies was tested by the χ2 test and the I2 test. When I2 0.1 indicates that there was no heterogeneity between studies, a fixed effect model was used for the combined effect amount; otherwise Use a random effects model and analyze the causes of heterogeneity. (2) Meta analysis: Binary variables use risk ratio (RR) as the analysis statistic, continuous variables use mean difference (MD) as the statistic, and give the effect values of both and their 95 % Confidence interval (CI). (3) Detection of publication bias: Describe publication bias by directly observing the symmetry of the inverted funnel chart.

Subgroup analysis: We will conduct subgroup studies based on gender, age, course of treatment, course of disease, sample size, and drug dose. If Meta analysis is not possible, we will conduct a descriptive analysis.

Sensibility analysis: We will conduct sensitivity analyses by omitting studies one by one to probe the impact of an individual study.

Country(ies) involved: China.

Keywords: Chinese medicine; cyclophosphamide; adult; refractory nephrotic syndrome; Meta analysis.

Contributions of each author:
Author 1 - LiBo Zhang - Description of results and writing of the article.
Author 2 - GuangZhen Liu - Search strategy, study selection, data extraction, data analysis, article writing.
Author 3 - YanChuang Liang - Study selection, data extraction, article writing.