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ADMINISTRATIVE INFORMATION**Support** - None.**Review Stage at time of this submission** - Preliminary searches.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202440110**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 April 2024 and was last updated on 27 April 2024.**INTRODUCTION**

Review question / Objective The study aims to evaluate the efficacy and safety of Tripterygium and its extracts in the treatment of psoriasis vulgaris.

Condition being studied Psoriasis is a systemic chronic inflammatory disease with a global incidence of 0.1-0.5 %. About 90 % of psoriasis is psoriasis vulgaris, which is more common in young and middle-aged people. It is characterized by red papules, which can be enlarged and fused into plaques by drips. White scales, bright films and spotted bleeding are typical features. The course of disease is long and easy to recur after regression.

Tripterygium wilfordii is a plant of Celastraceae. Its extracts have anti-inflammatory and immunomodulatory effects, and are inexpensive.

They are widely used in skin diseases, such as eczema, autoimmune bullous disease, etc. In recent years, the treatment of psoriasis by Tripterygium wilfordii and its extracts has gradually been widely accepted by clinicians. A number of clinical studies have confirmed that Tripterygium wilfordii and its extracts have better advantages in improving the clinical symptoms of psoriasis and controlling recurrence. Therefore, this study will conduct a systematic evaluation and meta-analysis of tripterygium wilfordii and its extracts in the treatment of psoriasis vulgaris, in order to provide evidence-based basis for the development and utilization of tripterygium wilfordii.

METHODS

Participant or population Participants who were definitely diagnosed with psoriasis vulgaris would

be included, and there will be no limitation on sex, ages, and other factors.

Intervention The intervention group was treated with *Tripterygium wilfordii* and its extract.

Comparator The control group was treated with conventional therapy.

Study designs to be included Randomized controlled trial.

Eligibility criteria Intervention time is greater than or equal to eight weeks.

Information sources The following online databases will be comprehensively searched including: The Cochrane Library, PubMed, EMBASE, Chinese Biomedical Literature Database, Chinese National Knowledge Infrastructure Database, Chinese Science and Technique Journals Database (VIP), and the Wanfang Database, Web of Science. All the literature retrieved is from the inception of the database to 27 April 2024. There are no language restrictions or regional restrictions. The subject words mainly include: Psoriasis vulgaris, *Tripterygium*, Psoriasis, *Tripterygium hypoglaucom*, *Tripterygium wilfordii*.

Main outcome(s) Clinical efficacy, inflammatory factors (IL-22, IL-17), immune function (CD3+, CD4+), blood lipid levels, adverse events.

Quality assessment / Risk of bias analysis The quality of the literature was evaluated using the Cochrane bias risk tool V.2.0. The two researchers independently evaluated the literature and cross-checked it, and the questionable part of the discussion was resolved or left to the third researcher to decide.

Strategy of data synthesis Meta-analysis was performed using Stata15.0 software. The odds ratio (OR) was used as the effect analysis statistic for the count data, and the mean difference (MD) or standardized mean difference (SMD) was used as the effect analysis statistic for the measurement data. The 95% confidence interval (CI) was calculated for all effect quantities. The heterogeneity between the results of the included studies was analyzed by I^2 test (test level $\alpha = 0.1$), and the heterogeneity was quantitatively judged by I^2 . When $P \geq 0.10$ and $I^2 \leq 50\%$, the heterogeneity between studies was small, so the fixed effect model was used for analysis. When $P < 0.10$ and $I^2 > 50\%$, it suggested that the heterogeneity

between studies was large, so the random effect model was used for analysis.

Subgroup analysis If there is significant heterogeneity between studies, subgroup analysis will be performed on patients of different ages and genders.

Sensitivity analysis Furthermore, if necessary, a sensitivity analysis will be performed.

Country(ies) involved China.

Keywords *Tripterygium*, *Tripterygium wilfordii*, Psoriasis, psoriasis vulgaris, Psoriasis.

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