INPLASY

Efficacy of acupuncture-related therapies for psoriasis: A traditional and network meta-analysis of randomized controlled trials (2020–2025)

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ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202640100

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 April 2026 and was last updated on 27 April 2026.

INTRODUCTION

Review question / Objective Objective:
To assess the efficacy and comparative effectiveness of acupuncture-related therapies (acupuncture, moxibustion, bloodletting, fire needling, plum-blossom needling, etc.) for psoriasis, compared with non-acupuncture therapies (Chinese herbal medicine, western medicine, phototherapy), placebo, or healthy controls.
Participants: Psoriasis patients.
Interventions: Acupuncture-related therapies.
Comparators: Other treatment modalities (traditional Chinese medicine, herbal medicine, western medicine, phototherapy, etc., excluding acupuncture-related therapies), placebo, or healthy controls.
Outcomes:
Primary: Total effective rate, cure rate, PASI score.
Secondary: DLQI score, pruritus score, TCM syndrome score, immune biomarkers, adverse events, relapse rate.
Study design: RCTs.

Condition being studied Psoriasis (a chronic, immune-mediated inflammatory skin disease).

METHODS

Participant or population Psoriasis patients.

Intervention Acupuncture-related therapies.

Comparator Other treatment modalities (traditional Chinese medicine, herbal medicine, western medicine, phototherapy, etc., excluding acupuncture-related therapies), placebo, or healthy controls.

Study designs to be included RCT.

Eligibility criteria Inclusion criteria:
1.Study design: Randomized controlled trials (RCTs);
2.Participants: Patients diagnosed with psoriasis (any subtype) according to established diagnostic criteria (e.g., Chinese Dermatology Association criteria, International Classification of Diseases, or clearly diagnosed as psoriasis in the original study). No restrictions on age, gender, ethnicity, or disease duration;
3.Interventions: Acupuncture-related therapies (including acupuncture, moxibustion, fire needling, bloodletting therapy, plum-blossom needling, etc.), used alone or in combination with other treatments;
4.Comparators: Non-acupuncture therapies (e.g., Chinese herbal medicine, western medicine, phototherapy), placebo, or healthy controls;
5.Outcomes: Studies must report all three primary outcomes — total effective rate, cure rate, and Psoriasis Area and Severity Index (PASI) score. Secondary outcomes (including DLQI score, pruritus score, TCM syndrome score, immune biomarkers, adverse events, or relapse rate) are not mandatory for inclusion;
6.Publication period: Published between January 1, 2020, and December 31, 2025;
7.Language: Chinese or English.

Exclusion criteria:
1.Studies not related to psoriasis;
2.Case reports, reviews, meta-analyses, systematic assessments, or animal studies;
3.Full text not available or records not retrieved;
4.New drug guidelines, expert consensus, editorials/commentaries;
5.Dissertations, theses, conference abstracts, or proceedings;
6.Non-Chinese or non-English publications;
7.Insufficient baseline information of participants;
8.Participants with comorbidities (not psoriasis alone);
9.Non-randomized controlled trials;
10.Interventions not involving acupuncture-related therapies (alone or in combination);
11.Comparators not including placebo, active non-acupuncture treatments, or healthy subjects;
12.Acupoint injection or medicated plaster as intervention;
13.Insufficient outcome data (must report total effective rate, cure rate, and PASI score);
14.Published before 2020.

Information sources PubMed, Embase, CNKI, CBM, Wan fang, VIP, Cochrane, ChiCTR and Clinical Trials databases.

Main outcome(s) Total effective rate, cure rate, andPASIscore.

Quality assessment / Risk of bias analysis Cochrane tools.

Strategy of data synthesis Software: RevMan and Stata.
Effect size: Risk ratio (RR) for dichotomous outcomes (total effective rate, cure rate); standardized mean difference (SMD) for continuous outcomes (PASI, DLQI, pruritus, TCM syndrome score, immune biomarkers). All analyses used 95% confidence intervals.
Heterogeneity: Assessed using Cochran's Q test and I^2 statistic. $I^2 > 50\%$ and $P < 0.1$ indicated substantial heterogeneity, and a random-effects model was applied. Otherwise, a fixed-effects model was used. Galbraith and L'Abbé plots assisted heterogeneity assessment.
Sensitivity analysis: Conducted by sequential omission of individual studies to explore sources of heterogeneity.
Traditional meta-analysis: Forest plots were generated using RevMan. Funnel plots, supplemented by Begg's and Egger's tests, were used to assess publication bias (Stata).
Meta-regression and subgroup analysis: Performed using Stata to explore potential sources of heterogeneity and to evaluate treatment effects across predefined subgroups. Publication bias within subgroups was also assessed using funnel plots with Begg's and Egger's tests.
Network meta-analysis: Conducted using Stata (network package). Evidence network maps were generated, a consistency model was fitted, and treatment ranking was estimated using the surface under the cumulative ranking curve (SUCRA).

Subgroup analysis Subgroup analyses were prespecified based on:
Intervention type: acupuncture, fire needling, moxibustion, catgut embedding, bloodletting, plumblossom needling, microneedling, and combination therapies (e.g., acupuncture + fire needling, fire needling + bloodletting).
Comparator type: Chinese herbal medicine, western medicine, phototherapy, and combined/other nonacupuncture therapies.
Treatment duration: 2, 4, 6, 8, and 12 weeks.
Psoriasis subtype: plaque psoriasis (including plaquetype) vs. other/unsubtyped.
A randomeffects model was used for all subgroup analyses.

Sensitivity analysis Sensitivity analysis was conducted using stata software; the sensitivity of a

particular article was assessed by observing changes in the effect size following its removal.

Country(ies) involved China.

Keywords Acupuncture-related therapies, psoriasis, efficacy, meta-analysis, RCTs, 2020–2025.

Contributions of each author

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