INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Efficacy and safety of tofacitinib in the treatment of vitiligo: A meta-analysis

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Review question / Objective: **The purpose of this study is to evaluate the efficacy of vitiligo in the treatment of vitiligo, and the selected research method is RCT.**
Condition being studied: **Vitiligo is an acquired depigmentation disease of skin and mucous membrane. The incidence of vitiligo accounts for 0.5%~1% of the world population. Vitiligo can be seen at any age, and the age of onset is becoming younger. The leukoplakia at the exposed site can lead to heavy psychological burden of patients and seriously affect their social life.The conventional Therapies are associated with distinct disadvantages. At present, many case reports and clinical trials have shown that tofacitinib is very helpful for the improvement of skin rash in patients with vitiligo.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 04 December 2022 and was last updated on 04 December 2022 (registration number INPLASY2022120017).

INTRODUCTION

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helpful for the improvement of skin rash in patients with vitiligo.

METHODS

Participant or population: Participant or population: All participants with vitiligo (generalized, segmental, nonsegmental) will be included. There will be no restriction to age.

Intervention: The observation group was treated with tofacitinib.

Comparator: The control group used conventional therapy only.

Study designs to be included: RCT,CT,CS.

Eligibility criteria: (1) Acquired depigmented or hypopigmented spots; (2) The skin lesions are well-defined and irregular in shape; (3) The pigmentation at the edges of the skin lesions is deepened; (4) The hairs in the skin lesions become white or visible around the follicle opening Repigmentation; (5) Vitiligo appears porcelain white under Wood lamp; (1) must be present in the above 5 items, and 2 of (2)~(5) can be immediately diagnosed as vitiligo.

Information sources: The electronic databases, like PubMed, Web of Science, EMBASE, The Cochrane Library, Chinese Scientifiifific Journals Database (VIP), China National Knowledge Infrastructure (CNKI), Wanfang database and China BioMedical Literature (CBM), weresearched systemically by two reviewers independently from inception to November 2021 to identify relevant Clinical trials according to our study inclusion criteria.16. (1) Acquired depigmented or hypopigmented spots; (2) The skin lesions are well-defined and irregular in shape; (3) The pigmentation at the edges of the skin lesions is deepened; (4) The hairs in the skin lesions become white or visible around the follicle opening Repigmentation; (5) Vitiligo appears porcelain white under Wood lamp; (1) must be present in the above 5 items, and 2 of (2)~(5) can be immediately diagnosed as vitiligo.

Main outcome(s): Percentage of clinical effectiveness and Incidence of adverse reactions.

Quality assessment / Risk of bias analysis: Two reviewers will independently assess risk of bias based on the following domains from recommendations from the Cochrane handbook: 1.Adequate sequence generation; 2. Allocation concealment; 3. Blinding; 4. Incomplete outcome data and how it was addressed; 5. Selective reporting of the outcome; 6. Any other biases. results of bias assessment will be presented in a figure and a graph indicating low, high or unclear risk of bias for each of the 6 items in each trial. Sensitivity analysis will be conducted based on the bias assessment to assess robustness of results.

Strategy of data synthesis: RevMan 5.4 software provided by the Cochrane Collaboration was used for data analysis and synthesis . Choose different measurement indexes according to different data types.Relative risk (RR) or odds ratio (OR) with 95% confidence intervals (CI) was used for dichotomous outcomes, while mean differences (MD) or standard mean differences (SMD) with 95% CI was used for continuous outcomes. According to heterogeneity test, fixed effect model or random effect model must be selected for effect size combination. When $p>0.05$ or $I^2 \leq 50\%$, fixed effect model was selected; when $p \leq 0.05$ or $I^2 > 50\%$, random effect model was selected. 21.Two reviewers will independently assess risk of bias based on the following domains from recommendations from the Cochrane handbook: 1.Adequate sequence generation; 2. Allocation concealment; 3. Blinding; 4. Incomplete outcome data and how it was addressed; 5. Selective reporting of the outcome; 6. Any other biases. results of bias assessment will be presented in a figure and a graph indicating low, high or unclear risk of bias for each of the 6 items in each trial. Sensitivity analysis will be conducted based on the bias assessment to assess robustness of results.

Subgroup analysis: Subgroup analysis according to oral and topical tofacitinib.

Sensitivity analysis: Sensitivity analysis was performed with Stata, and the sensitivity of the article was reflected by the change in effect size after deleting one of the articles.

Country(ies) involved: China.

Keywords: tofacitinib , vitiligo , Efficacy , safety.

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