INPLASY

Efficacy of Salvia miltiorrhiza Bunge in treating ulcerative colitis: A systematic review and meta-analysis of animal studies

Corresponding author:
Zhuzhu Wu

3220006803@student.must.edu.mo

Author Affiliation:
Macau University of Science and Technology.

Wu, ZZ; Shi, SS; Man, SA.

ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 December 2024 and was last updated on 18 December 2024.

INTRODUCTION

*R*eview question / Objective Efficacy of Salvia miltiorrhiza Bunge in treating ulcerative colitis remains inconclusive based on animal models.

Condition being studied Ulcerative colitis (UC) is a chronic inflammatory disease that affects the large intestine (colon) and rectum.The incidence and prevalence of UC is increasing in recent years. Genetic and environmental factors may play important roles. As a typical gastrointestinal disease, the clinical symptoms of UC mainly include rectal bleeding, diarrhea, urgency, tenesmus, abdominal pain, and so on. Although the therapeutic options are expanding, 10-20% of patients still require proctocolectomy for medically refractory disease. The utilization of Chinese herbal therapy appears to yield a significant therapeutic impact on UC. Salvia miltiorrhiza Bunge (SM) has been shown to be an effective treatment for UC in animal models. However, no quantitative data are available regarding SM treatment in UC.

METHODS

Participant or population Ulcerative colitis occurred in all randomized animal models, regardless of species, sex, and age.

Intervention The treatment group will be treated with Salvia miltiorrhiza Bunge.

Comparator The control group will be treated with either normal saline or placebo.

Study designs to be included Relevant studies on the effects of Salvia miltiorrhiza Bunge on animals with ulcerative colitis were included.

Eligibility criteria Relevant studies on the effects of Salvia miltiorrhiza Bunge combined with alternative drugs or therapy on ulcerative colitis animals were excluded.

Information sources Two independent reviewers performed a comprehensive search of the

PubMed, Web of Science, and Elsevier ScienceDirect published from January 1, 2000, to August 31, 2024 without restriction on language.

Main outcome(s) Colon length and colonic histological score were the main outcomes.

Quality assessment / Risk of bias analysis The bias risk and quality assessment of all included studies were independently evaluated by two reviewers using SYRCLE's risk of bias tool. Disagreements will be resolved by a third party.

Strategy of data synthesis Direct data were obtained from the included literature, while those without direct data were extracted from images using Grapher10 software. Missing data were acquired by contacting the corresponding author. The data for each outcome will be exclusively subjected to mathematical statistical analysis. The weighted mean difference (WMD) is used when the effect size units are consistent across included studies in the meta-analysis, while the standardized mean difference (SMD) is employed when the effect size units are inconsistent. The I^2 index will be used to account for heterogeneity among the included studies. Fixed-effect models will be used when the heterogeneity among studies is below 50%, while random effects models will be employed for cases where it exceeds 50%.

Subgroup analysis Sources of heterogeneity will be analyzed by grouping them according to animal species, inducers in animal models, dose, mode of administration, the administration of Salvia miltiorrhiza Bunge, and time of administration.

Sensitivity analysis The sensitivity analyses will be conducted when the heterogeneity among studies exceeds 50%.

Country(ies) involved China.

Keywords Salvia miltiorrhiza Bunge; ulcerative colitis; meta-analysis; colon length; colonic histological score.

Contributions of each author
Author 1 - Zhuzhu Wu.
Email: 3220006803@student.must.edu.mo
Author 2 - Shasha Shi.
Email: s15665722125@163.com
Author 3 - Shuai Man.
Email: 13615422589@163.com