INPLASY PROTOCOL

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Support: **NSFC.**

Review Stage at time of this submission: **The review has not yet started.**

Conflicts of interest:
None declared.

Effects of acupuncture and moxibustion on the gut microbiota of Irritable Bowel Syndrome (IBS): a protocol for the systematic review and meta-analysis of randomized controlled trials in animal models

Jiang, Q[1]; Cao, Z[2]; Zhang, Y[3]; Qiu, J[4]; Chen, H[5]; Li, J[6].

Review question / Objective: **Despite advances in research on Irritable Bowel Syndrome (IBS) with the development of science and technology, the pathogenesis and treatment response of IBS remain unclear. Recent studies have revealed a significant role of the microbiomein the development of IBS, and studies have found that the gut microbiota may explain the therapeutic effect of acupuncture and moxibustion in the treatment of T2DM. The aim of this study was to systematically review all randomized controlled trials (RCTs) on IBS in animal models for gut microbiota to assess the effectiveness.**
Condition being studied: **IBS is a common functional bowel disease with unclear pathogenic mechanism, and there is no reliable treatment options in clinical.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 May 2022 and was last updated on 18 May 2022 (registration number INPLASY202250118).

INTRODUCTION

Review question / Objective: **Despite advances in research on Irritable Bowel Syndrome (IBS) with the development of science and technology, the pathogenesis and treatment response of IBS remain unclear. Recent studies have revealed a significant role of the microbiomein the development of IBS, and studies have found that the gut microbiota may explain the therapeutic effect of acupuncture and moxibustion in the treatment of T2DM. The aim of this study was to systematically**

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review all randomized controlled trials (RCTs) on IBS in animal models for gut microbiota to assess the effectiveness.

Condition being studied: IBS is a common functional bowel disease with unclear pathogenic mechanism, and there is no reliable treatment options in clinical.

METHODS

Participant or population: All animal models (no restriction by animal, age, sex, genetic profile) used in studies will be included.

Intervention: The study which acupuncture and moxibustion was applied in treating with irritable bowel syndrome in animal model. All route of administration and timing of administration are eligible for inclusion.

Comparator: No treatment group, sham-treatment, western medicine group.

Study designs to be included: Randomized controlled trials.

Eligibility criteria: Articles identified from different databases will be review independently by two authors. Duplicates were fist removed. Second articles will be screened through title reading and abstract for eligibility. A full text re-evaluation of studies that had not been excluded was performed. the authors will have to reach consensus on whether or not studies that had not been excluded was then performed. The author will participate in the process to observe whether or not the study should be included.Screening will be performed in two phases, namely initial screening based on title and abstract, followed by full-text screening of the eligible articles for final inclusion. 2 observers will independently assess each article. discrepancies will be resolved by consulting a third investigator.Title-abstract screening:1) Not an animal study2) Study combined with other intervention will be excluded.3) No relevant outcomes4) Not an original full research paper5) Cross-over studies, studies without a separate control group.

Information sources: MEDLINE, EMBASE, Web of Science, CNKI.

Main outcome(s): Gut microbiota.

Additional outcome(s): AWR.

Quality assessment / Risk of bias analysis: By use of SYRCLE's risk of bias tool. By use of SYRCLE's risk of bias tool. Two reviewers will assess the methodological quality of each study independently, using SYRCLE's risk of bias tool. In the event of doubt or disagreement, a third reviewer will be consulted.

Strategy of data synthesis: Quantitive synthesis is planned if the included studies are sufficiently homogeneous. The mean differences between pre-intervention and post-intervention were used to find the comparison values between the intervention group and the control group. Mean difference between groups was converted to standardized mean difference, with a 95% confidence interval. A meta-analysis will be performed for all outcome measures reported in 10 or more articles. For subgroup analysis a minimum of 8 studies per subgroup is required. If meta-analysis is not possible, data will be reported through a descriptive summary.

Subgroup analysis: If the necessary data are available, subgroup analyses will be done. The following study characteristics will be examined as potential source of heterogeneity: species (stratified per species); method of administration (stratified per method); sex (stratified per sex); intervention (linear); blinding of outcome assessment reported (stratified yes vs no). For stratified analyses, a minimum number of 8 studies per subgroup is required.

Sensitivity analysis: We performed sensitivity analysis by getting rid of single studies if there were sufficient studies in order to estimate the robust of the result of meta-analysis.

Country(ies) involved: China.

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Keywords: gut microbiota, Irritable Bowel Syndrome, acupuncture, moxibustion.

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