INPLASY

Acupuncture at the 'yishu' acupoint for Diabetes Mellitus：A systematic review and meta-analysis of preclinical and clinical studies

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ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - Completed but not published.

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 20 January 2024 and was last updated on 20 January 2024.

INTRODUCTION

Review question / Objective The objective of this systematic review is to evaluate the therapeutic impact of acupuncture at the EX-B3 on both preclinical (animal models) and clinical aspects of DM.

Condition being studied Our study is the inaugural attempt to explore the impact of acupuncture at EX-B3 on DM across preclinical and clinical studies. Our findings indicate the favorable effects of acupuncture at EX-B3 on DM. Both human and animal studies consistently reveal the significant enhancement of pancreatic islet cell function in subjects with DM, accompanied by increased insulin levels, reduced blood glucose and lipids, thereby ameliorating the condition. Nevertheless, no discernible impact on body weight was observed in both animal and human subjects with DM. Acupuncture EX-B3 exhibited no influence on the body weight of DM patients and animals.

METHODS

Participant or population All studies involving acupuncture treatment for DM, whether in animals or humans, were considered.

Intervention Only acupuncture and moxibustion.

Comparator In animal studies, the model group underwent modeling only without any therapeutic interventions. Studies without a model group were excluded. In human studies, the control group received treatment differing only in the absence of acupuncture at EX-B3 compared to the treatment group.The type 2 diabetes mellitus model group was modelled only without any treatment.

Study designs to be included RCT.

Eligibility criteria Encompassing all studies on acupuncture treatment for DM involving EX-B3.

Information sources PubMed, Scopus, Embase, Cochrane Library, Web of Science, Ovid Medline, Wan Fang, CNKI, and VIP.

Main outcome(s) Acupuncture at EX-B3 significantly reduced TG, TC, HDL-C, LDL-C, FBG, OGTT-AUG, and INS in DM animals, decreased HOMA-IR, and increased HOMA-β.

Quality assessment / Risk of bias analysis The average methodological quality score for animal studies was 5.77.Methodological quality results for human studies revealed 1 low-risk, 2 high-risk, and 1 with some concern.

Strategy of data synthesis This study conducted meta-analysis using RevMan 5.4 and performed sensitivity analysis using Stata 17.0.

Subgroup analysis The variability in FBG post-intervention resulted from diverse intervention modalities, while the heterogeneity in TG was attributed to variations in the animal models used.

Sensitivity analysis After analyzing the data, we found that data FBG after intervention did not change significantly, indicating that the results are very stable.

Country(ies) involved China.

Keywords diabetes mellitus, acupuncture, weiwanxiashu, yishu, meta-analysis, systermatic review.

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