INPLASY

INPLASY202470092

doi: 10.37766/inplasy2024.7.0092

Received: 23 July 2024

Published: 23 July 2024

Corresponding author:
Xiang Li

lixiang11897@bjzhongyi.com

Author Affiliation:
Beijing Hospital of Traditional Chinese Medicine, Capital Medical University, Beijing 100010, China.

Mechanisms of Traditional Chinese Medicine in Modulating Cardiac Microvascular Endothelial Cells in Various Injury Models: A Comprehensive Systematic Review

Zhou, HW; Liu, HX; Li, X; Chen, JP; Zong, HQ.

ADMINISTRATIVE INFORMATION

Support - This work was supported by Research and Translational Application of Clinical Characteristic Diagnosis and Treatment Techniques in the Capital (No. Z221100007422127) and grants from the National Natural Science Foundation of China (No. 8210151350).

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

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202470092

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 July 2024 and was last updated on 23 July 2024.

INTRODUCTION

Review question / Objective To gain the underlying mechanisms of compound Chinese medicine (CCM) and its constituents in modulating cardiac microvascular endothelial cells (CMECs) in various injury models.
The research question has been designed in accordance with PICOS:
P (Population): CMECs;
I (Intervention): treatment with CCM and its constituents;
C (Comparator): no treatment, or standard treatment;
O (Outcome): the effect of CCM and its constituents;
S (Study design): in vitro and in vivo.
To gain the underlying mechanisms of compound Chinese medicine (CCM) and its constituents in modulating cardiac microvascular endothelial cells (CMECs) in various injury models.

Condition being studied Coronary microcirculatory dysfunction (CMD) serves as a significant adverse prognostic factor for patients with ischemic heart disease (IHD). Effective identification and management of CMD can lead to improved well-being and alleviation of angina symptoms. The development of CMD is significantly influenced by structural and/or functional abnormalities in cardiac microvascular endothelial cells (CMECs). In this review, we will survey the protective effects of compound Chinese medicine (CCM) and its constituents on CMECs.

METHODS

Participant or population Studies involving cardiac microvascular endothelial cells will be included.

Intervention Compound Chinese medicine (CCM) and its constituents.

Comparator No treatment, or standard treatment.

Study designs to be included In vivo and in vitro studies.

Eligibility criteria The inclusion criteria consisted of the following: 1) the literature had to be written in English, 2) it had to be the full text, 3) the content of the literature had to be related to Chinese herbal medicines (CHM), and 4) the study design had to involve CMECs or cardiac microvasculature. On the other hand, the exclusion criteria encompassed irrelevant literature, reviews, meta-analyses, case reports, conference proceedings, book chapters, letters to the editor, oral presentations, posters, and editorials.

Information sources PubMed, Embase, Web of Science, Scopus, CNKI, and CBM disc.

Main outcome(s) The structural and functional effects of compound Chinese medicine (CCM) and its constituents on cardiac microvascular endothelial cells (CMECs). as assessed in terms of: endothelial function, antioxidant, anti-apoptotic, anti-inflammatory effects, and so on.

Quality assessment / Risk of bias analysis NA.

Strategy of data synthesis NA.

Subgroup analysis NA.

Sensitivity analysis NA.

Country(ies) involved China.

Keywords Traditional Chinese medicine, Cardiovascular disease, Cardiac microvascular endothelial cells, Coronary microcirculatory function, Mechanisms.

Contributions of each author

Author 1 - Huiwen Zhou.
Email: zhouhuiwen1112022@163.com
Author 2 - Hongxu Liu.
Email: lhx_@263.net
Author 3 - Xiang Li.
Email: lixiang11897@bjzhongyi.com
Author 4 - Jiaping Chen.
Email: chenjp1997@163.com
Author 5 - Huiqi Zong.
Email: 1837058637@qq.com