

INPLASY PROTOCOL

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

Conflicts of interest:
None declared.

INTRODUCTION

Review question / Objective: The aim of this systematic review is to evaluate the efficacy and safety of Electroacupuncture in the treatment of Obesity complicated with hyperlipidemia.

Rationale: Acupuncture and moxibustion is a safe and effective means of treatment. By

The efficacy and safety of Electroacupuncture as adjuvant therapy for Obesity with hyperlipidemia: a protocol for systematic review and meta-analysis

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Review question / Objective: The aim of this systematic review is to evaluate the efficacy and safety of Electroacupuncture in the treatment of Obesity complicated with hyperlipidemia.

Condition being studied: Obesity is a chronic metabolic disease, which is the key to hyperlipidemia, cardiovascular and cerebrovascular diseases and endocrine system diseases. Due to the excessive accumulation of fat in the human body, the weight of obese patients exceeds the normal range, resulting in dyslipidemia. Studies have shown that electroacupuncture is an effective method for the adjuvant treatment of obesity with hyperlipidemia.

Information sources: PubMed, EMBASE, CENTRAL, China Biomedical Literature Database, Chinese National Knowledge Infrastructure (CNKI), Wanfang Data, and VIP will be systematically searched from inception to May 1, 2022. There is no restrictions on languages.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 May 2022 and was last updated on 29 May 2022 (registration number INPLASY202250165).

stimulating acupoints, it has the effect of strengthening the spleen, removing dampness and dredging meridians, and can play a benign adjustment role. Acupuncture and moxibustion can significantly reduce the weight and blood lipid level of obese patients with hyperlipidemia without obvious adverse reactions. The main location of obesity

patients with hyperlipidemia is spleen and stomach. Acupuncture combined with electroacupuncture can not only regulate the abdominal meridians and Qi, but also have plastic effect. The combined use of various points can invigorate the spleen and promote diuresis, remove turbidity and reduce lipid.

Condition being studied: Obesity is a chronic metabolic disease, which is the key to hyperlipidemia, cardiovascular and cerebrovascular diseases and endocrine system diseases. Due to the excessive accumulation of fat in the human body, the weight of obese patients exceeds the normal range, resulting in dyslipidemia. Studies have shown that electroacupuncture is an effective method for the adjuvant treatment of obesity with hyperlipidemia.

METHODS

Search strategy: (((("obesity"[mh] OR Obesity Hypoventilation Syndrome[tw]) OR Overweight[tw]) AND (((((((("hyperlipidemias"[mh] OR "dyslipidemias"[mh]) OR Hyperlipemia[tw]) OR Hyperlipemias[tw]) OR Hyperlipidemia[tw]) OR Lipidemia[tw]) OR Lipidemias[tw]) OR Lipemia[tw]) OR Lipemias[tw])) AND "electroacupuncture"[mh]) AND (((("randomized controlled trial"[All Fields] OR "randomized controlled trials as topic"[mh] OR "randomized controlled trial"[All Fields] OR "randomised controlled trial"[All Fields]) OR ("controlled clinical trial"[All Fields] OR "controlled clinical trials as topic"[mh] OR "controlled clinical trial"[All Fields])) OR ("random allocation"[mh] OR ("random"[All Fields] AND "allocation"[All Fields]) OR "random allocation"[All Fields] OR "randomized"[All Fields])) OR randomly[All Fields]) OR ("clinical trials as topic"[mh] OR ("clinical"[All Fields] AND "trials"[All Fields] AND "topic"[All Fields]) OR "clinical trials as topic"[All Fields] OR "trial"[All Fields])) OR groups[AllFields]).

Participant or population: We will be employed Obesity with hyperlipidemia participant.

Intervention: We will be interested in the effectiveness of electroacupuncture in adjuvant therapy in clinical trials, so the addition of basic Western medicine will be excluded.

Comparator: This basic treatments (simvastatin, fluvastatin, rosuvastatin, atorvastatin and other treatments) will be compared for this study.

Study designs to be included: Randomized controlled trials (RCTs).

Eligibility criteria: We will be employed Obesity with hyperlipidemia participants (aged ≥ 18 years), who are diagnosed by 2022 Consensus of experts on prevention and treatment of adult obesity in China of $BMI \geq 23.0$ and 2007 Guidelines for the prevention and treatment of dyslipidemia in Chinese adults of total cholesterol (TC) ≥ 5.18 mmol/L or Triglyceride (TG) ≥ 1.70 mmol/l or High density lipoprotein (HDL) ≤ 1.04 mmol/l or Low density lipoprotein (LDL) ≥ 3.37 mmol/l. Malignant tumors, liver cirrhosis with other diseases (e.g. Pulmonary heart failure, Coronary heart failure) will be excluded.

Information sources: PubMed, EMBASE, CENTRAL, China Biomedical Literature Database, Chinese National Knowledge Infrastructure (CNKI), Wanfang Data, and VIP will be systematically searched from inception to May 1, 2022. There is no restrictions on languages.

Main outcome(s): The primary outcome will be BMI and the ratio of Four items of blood lipid (TC、TG、LDL-C、HDL-C), which sensitively reflects the distribution of Blood lipids.

Additional outcome(s): The secondary outcome will includes WC. So it has become an important index for evaluation, and is widely used in clinical diagnosis and clinical research.

Data management: Two researchers will independently screened the literature, extraction information and cross-checked.

Any disagreement will be resolved through discussion or consultation with a third party. Data extraction will be included the following includes: 1) Basic information of included studies: title, first author, publication time and study area;2) Baseline and final follow-up data related to outcome measures. If a study reported multiple follow-up sites, only the last follow-up data will be extracted. The crossover test extracted only the first stage follow-up.

Quality assessment / Risk of bias analysis:

Two independent investigators will be assessed the risk of bias in the included studies, and any disagreement will be settled by a third party through consultation. The cross-sectional study will be evaluated using the evaluation criteria recommended by the American agency for health care research and quality (AHRQ). The data sources, observation time and quality control will be evaluated by 11 items. If the answer to an item is "no" or "unclear", no score will be given; if the answer is "yes". The study will be rated as poor, medium and high quality.

Strategy of data synthesis: 1) Continuous outcomes: Weighted mean difference (WMD) or standardized mean difference and 95% confidence interval (CI) will be used as the combined effect size; Inverse variance method will be used to merge data. 2) Dichotomous outcomes: Relative risk (RR) and 95% CI will be used as the combined effect size, and mantel-Haenszel method will be used to merge data. Cochran's Q test and I² statistics will be used to evaluate inter-study heterogeneity for each outcome. GRADE tool will be used to evaluate the quality of evidence for each outcome.

Subgroup analysis: Subgroup analysis will be measured for s treatment time (<4weeks vs ≥ 4weeks), duration of electroacupuncture (<20min vs ≥20min) and subgroup analysis by Electroacupuncture intensity (≥Level 2 vs <Level 2) also be done.

Sensitivity analysis: Sensitivity analysis will be High risk articles will be excluded before analysis and the fixed effect model will be replaced by the effect model.

Language: None restriction.

Country(ies) involved: China.

Keywords: Electroacupuncture; Hyperlipidemia; Obesity; Meta-analysis; protocol.

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