INPLASY PROTOCOL

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Review Stage at time of this submission: Data analysis.

Conflicts of interest: None declared.

Cardiac rehabilitation of Baduanjin exercise in coronary heart disease after PCI: a protocol for systematic review and meta-analysis of randomized controlled trials

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Review question / Objective: Can Baduanjin improve the cardiac rehabilitation of patients with coronary artery disease after percutaneous coronary intervention surgery?

Condition being studied: Coronary heart disease is a common chronic disease among middle-aged and elderly people, and the number of patients has been increasing rapidly in recent years. Percutaneous coronary intervention (PCI) is currently one of the main clinical methods for the treatment of coronary heart disease. It has the advantages of less complications and less trauma. But at the same time, patients after PCI still have the risk of recurring cardiac events. Therefore, long-term rehabilitation after surgery has important clinical significance for the outcome of the disease. This study uses the method of Meta analysis to systematically evaluate the effect of Baduanjin exercise in patients after coronary heart disease PCI, and hopes to provide evidence-based basis for the implementation of Baduanjin exercise for patients after coronary heart disease PCI.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 March 2021 and was last updated on 19 March 2021 (registration number INPLASY202130065).

INTRODUCTION

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for the treatment of coronary heart disease. It has the advantages of less complications and less trauma. But at the same time, patients after PCI still have the risk of recurring cardiac events. Therefore, long-term rehabilitation after surgery has important clinical significance for the outcome of the disease. This study uses the method of Meta analysis to systematically evaluate the effect of Baduanjin exercise in patients after coronary heart disease PCI, and hopes to provide evidence-based basis for the implementation of Baduanjin exercise for patients after coronary heart disease PCI.

METHODS

Participant or population: Patients at least 18 years' old with a diagnosis of coronary heart disease and received Percutaneous coronary intervention, and able to give informed consent, were enrolled.

Intervention: Baduanjin exercise.

Comparator: Conventional Western medicine.

Study designs to be included: RCT.

Eligibility criteria: (1)Study type. We will collect all available RCTs of Baduanjin exercise-related therapies for CHD after PCI, regardless of blinding, publication status, or region, but the language is limited to Chinese and English. (2)Participants. Patients at least 18 years' old with CHD who received Baduanjin exercise intervention after PCI will be included without limitation of race, sex, education and economic level. (3)Interventions. Using Baduanjin exercise for CHD patients post-PCI surgery. Included variation in intensity, frequency and duration will be accepted. (4)Outcomes. The primary outcome will included left ventricular ejection fraction (LVEF). The secondary outcomes will included Seattle Angina Questionnaire (SAQ), SF-36 health survey scale (SF-36), Zung Self-rating Anxiety scale (SAS) and self-rating depression scale (SDS).

Information sources: PubMed, Excerpta Medica Database (EMBASE), Cochrane Library, Web of Science, Wanfang Database, SINOMED, China Science and Technology Journal Database (VIP) and China National Knowledge Infrastructure (CNKI).

Main outcome(s): Left ventricular ejection fraction (LVEF).

Additional outcome(s): Seattle Angina Questionnaire (SAQ), SF-36 health survey scale (SF-36), Zung Self-rating Anxiety scale (SAS) and self-rating depression scale (SDS).

Quality assessment / Risk of bias analysis: The risk of study bias was assessed using the Cochrane Handbook for Systematic Reviews. The risk of bias was evaluated with regard to the following aspects: generating random sequences, allocation of hidden methods, application of the blinding method, incomplete results, selective reporting of results, and other bias. Funnel diagrams were used to detect publication bias.

Strategy of data synthesis: The Cochrane Collaboration's Review Manager 5.3 software was used to extract the relevant dichotomous or continuous data from the literature for analysis. Risk ratios (RRs) were calculated for dichotomous data, whereas the mean differences (MDs) and standard deviations (SDs) were calculated for continuous variables. The corresponding 95% confidence intervals (CI) and forest plots were used in both cases. In our meta-analysis, we used SD values when the data were in the same unit. When they were in different units, we performed a conversion. The chisquared and I^2 (inconsistency) tests were used to detect heterogeneity. A P value50% indicated that there was significant heterogeneity. The fixed-effect model was used when P>.10 and I^2<50%, and the random-effect model was used when P<.10 or $I^2 \geq 50\%$.

Subgroup analysis: If data permit, we will conduct subgroup analysis for different

groups with a minimum of two trials split by different intervention.

Sensitivity analysis: We will carry out sensitivity analyses in order to evaluate reliable results. The methods include changing the type of analysis methods (random-effects model or fixed-effect model), eliminating each of the included studies one by one and then combine the effect quantities.

Country(ies) involved: China.

Keywords: Baduanjin exercise; cardiac rehabilitation; coronary heart disease; percutaneous coronary intervention; protocol; systematic review; randomized controlled trials.

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