

Efficacy of Shexiang Baoxin Pill combined with metoprolol in the treatment of unstable angina pectoris: systematic review and meta-analysis

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ADMINISTRATIVE INFORMATION**Support** - National Natural Science Foundation of China 611.**Review Stage at time of this submission** - Preliminary searches.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY2024110050**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 10 November 2024 and was last updated on 15 January 2025.**INTRODUCTION**

Review question / Objective The incidence of unstable angina pectoris is increasing year by year. Therefore, the efficacy of Shexibao pill combined with metoprolol in the treatment of unstable angina pectoris is attracting more and more attention. The purpose of this systematic review is to accurately evaluate the efficacy of Shexibao pill combined with metoprolol.

P: Patients with unstable angina

I: Musk heart-preserving pills combined with metoprolol

C: Conventional Western medicine treatment

O: Angina response rate, electrocardiogram response rate, left heart function, angina attack frequency, angina attack interval, angina duration, cholesterol (TC), triglyceride (TG), low density lipoprotein (LDL-C), C-reactive protein (hs-CRP), tumor necrosis factor- α (TNF- α), interleukin-6 (IF-6), SA Q score

S: Randomized controlled trial

S: RCT or cohort study.

Condition being studied Unstable angina pectoris is quite common in clinical practice. It is in a condition between exertional stable angina pectoris and acute myocardial infarction, with a tendency to transform into acute myocardial infarction. Its onset is rather sudden, the condition is complex, and both the disability rate and mortality rate remain high, posing a serious threat to patients' lives and safety. Metoprolol, as a commonly used drug, is widely applied in the treatment of various diseases such as hypertension, angina pectoris, and coronary atherosclerotic heart disease, and it can exert a powerful protective effect on the cardiovascular system. Musk heart-protecting pills have the functions of aromatic warmth and circulation promotion, as well as qi tonification and heart strengthening. They are mainly used to treat chest pain caused by qi stagnation and blood stasis, as well as angina pectoris resulting from myocardial ischemia.

METHODS

Search strategy A combination of subject terms and free terms was used to search for RCTs on the treatment of unstable angina pectoris with Shexiang Baoxin Pill combined with metoprolol in PubMed, Web of Science, Cochrane Library, EMBASE, CNKI, VIP, Wanfang, and SinoMed from the establishment of the databases to January 5, 2025. The Chinese search terms were "麝香保心丸", "美托洛尔", "不稳定型心绞痛", "随机", "随机对照试验"; the English search terms were "Shexiang Baoxin Pill", "Metoprolol", "Unstable Angina Pectoris", "Angina, Unstable", "Angina at Rest", "Randomized", "Randomized Controlled Trial", "RCT", etc. In addition, academic conference proceedings and related cardiology journals both at home and abroad were also searched.

Participant or population Unstable Angina Pectoris.

Intervention Shexiang Baoxin Pill combined with metoprolol.

Comparator Conventional western medicine treatment

Study designs to be included RCT.

Eligibility criteria

1. Inclusion criteria:

1.1 Study type: RCTs on the combined use of Shexiang Baoxin Pill and Metoprolol in the treatment of unstable angina pectoris, regardless of whether blinding or allocation concealment was used. The language is limited to Chinese or English.

1.2 Study subjects: Patients clinically diagnosed with unstable angina pectoris, all of whom meet the clinical diagnostic criteria for unstable angina pectoris in the "Diagnosis and Treatment Guidelines for Unstable Angina Pectoris and Non-ST-segment Elevation Myocardial Infarction" published in the Chinese Journal of Cardiovascular Diseases.

1.3 Intervention and control measures: The control group received conventional treatment and corresponding care for unstable angina pectoris patients, while the observation group was given oral Metoprolol and Shexiang Baoxin Pill on the basis of conventional treatment.

1.4 Outcome indicators: The included studies must include at least one outcome indicator: ①Effective rate of angina pectoris, ②Effective rate of

electrocardiogram, ③Left ventricular function, ④Frequency of angina pectoris attacks, ⑤Interval between angina pectoris attacks, ⑥Duration of angina pectoris attacks, ⑦Cholesterol (TC), ⑧Triglycerides (TG), ⑨Low-density lipoprotein (LDL-C), ⑩High-sensitivity C-reactive protein (hs-CRP), ⑪Tumor necrosis factor- α (TNF- α), ⑫Interleukin-6 (IL-6), ⑬SAQ score.

2. Exclusion criteria:

Literatures for which the full text cannot be obtained; literatures with obviously incorrect information; duplicate publications; literatures of review, meta-analysis, case reports, commentaries, or economic evaluations; non-RCTs; trials that do not provide set outcome indicators; patients with contraindications or intolerance to Shexiang Baoxin Pill or Metoprolol; incomplete research data; studies including patients with stable angina pectoris.

Information sources PubMed, Web of Science, Cochrane Library, EMBASE, CNKI, VIP, Wanfang, SinoMed.

Main outcome(s) ①Effective rate of angina pectoris, ②Effective rate of electrocardiogram, ③Left ventricular function, ④Frequency of angina pectoris attacks, ⑤Interval between angina pectoris attacks, ⑥Duration of angina pectoris attacks, ⑦Cholesterol (TC), ⑧Triglycerides (TG), ⑨Low-density lipoprotein (LDL-C), ⑩High-sensitivity C-reactive protein (hs-CRP), ⑪Tumor necrosis factor- α (TNF- α), ⑫Interleukin-6 (IL-6), ⑬SAQ score.

Additional outcome(s) None.

Data management NoteExpress.

Quality assessment / Risk of bias analysis Cochrane TOOL.

Strategy of data synthesis There was no heterogeneity in the data, and fixed effect combined data was selected. If heterogeneity exists in the data, sensitivity analysis, Rabe chart, subgroup analysis or meta regression are used to find the source of heterogeneity. If heterogeneity is small, heterogeneity can be ignored and only fixed-effect model is used for analysis. If the source of heterogeneity cannot be analyzed, a random effects model can be used for analysis.

Subgroup analysis Subgroup analysis was performed according to patient age, drug dosage, drug duration and outcome index unit.

Sensitivity analysis After deleting any of the literatures, the combined results of the remaining literatures are not different from those without deletion, which means that the sensitivity analysis has been passed.

Language restriction: English.

Country(ies) involved CHINA.

Keywords Shexiang Baoxin Pill combined with metoprolol;unstable angina pectoris;meta-analysis

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