

# What is the effect of Xinkeshu tablets added to usual treatment on the function of the circulatory system in patients with coronary artery disease and high blood pressure?

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<b>Registration date</b> 05/02/2020	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 28/03/2023	<b>Condition category</b> Circulatory System	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Hypertension (high blood pressure) and coronary artery disease (CAD) are increasingly common. Having these conditions means a person is more likely to suffer a heart attack or stroke. In addition, 3 in 10 patients with CAD suffer from depression. Hypertension and CAD are linked to damage to blood vessels and the blood vessels then start to lose the ability to function normally. Xinkeshu, a traditional Chinese medicine containing herbs, has been proven to reduce blood pressure, improve CAD symptoms and improve depression and anxiety. This study aims to investigate whether Xinkeshu can protect blood vessels in patients with CAD and hypertension, and also whether it can improve symptoms of depression and anxiety.

### Who can participate?

Patients aged 18-65 years with CAD and hypertension

### What does the study involve?

Participants will be randomly allocated to one of two groups. One group will receive usual treatment for hypertension and CAD (aspirin, atorvastatin and amlodipine). The other group will receive the usual treatment and Xinkeshu tablets. Both groups will take the treatment for 12 weeks. They will have blood samples taken, will have their blood vessels examined using a blood pressure measuring device and ultrasound, and will fill in questionnaires about symptoms of depression and anxiety before they start the treatment and at 4 weeks and 12 weeks after the start of treatment.

### What are the possible benefits and risks of participating?

Participants will get XKS pills for free to treat their CAD and hypertension. The usual treatment medicines are commonly used and generally safe.

### Where is the study run from?

The First Affiliated Hospital, Sun Yat-Sen University (China)

When is the study starting and how long is it expected to run for?  
July 2017 to September 2020

Who is funding the study?  
Shandong Wohua Pharmaceutical Technology Co Ltd (China)

Who is the main contact?  
Jun Tao, taojungz123@163.com

## Contact information

### Type(s)

Public

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# Additional identifiers

## Clinical Trials Information System (CTIS)

Nil known

## ClinicalTrials.gov (NCT)

Nil known

## Protocol serial number

2017154

# Study information

## Scientific Title

The protective effect of Xinkeshu tablets on vascular function in patients with coronary artery disease combined with hypertension: a randomized controlled study.

## Acronym

X-CHRCs

## Study objectives

Xinkeshu tablets have a protective effect on vascular endothelium by improving endothelial progenitor cells function and accelerating vascular repair in patients with coronary artery disease combine with hypertension through the CXCR4/JAK2 signaling pathway.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Approved 15/08/2017, Ethics Committee of Clinical Research and Experimental Animals, The First Affiliated Hospital, Sun Yat-Sen University in Guangzhou (58 Zhongshan Road 2, Guangzhou, Guangdong, 510000, China; +86 020-87755766; linf7@mail.sysu.edu.cn), ref: 2017 [154]

## Study design

Randomized controlled trial

## Primary study design

Interventional

## Study type(s)

Treatment

## Health condition(s) or problem(s) studied

Coronary heart disease combined with hypertension and vascular dysfunction

## Interventions

We will recruit 68 patients with hypertension and coronary artery disease who had been admitted to The First Affiliated Hospital, Sun Yat-Sen University. Patients will be randomly divided into XKS group (34) and control group (34). The XKS group will receive routine treatment

(aspirin 100 mg qd, atorvastatin 20 mg qd, amlodipine 5 mg qd) combined with Xinkeshu tablets (Shandong Wohua Pharmaceutical Co Ltd), 4 tablets, three times a day for 3 months. The control group will receive routine treatment for 3 months. At the first day, the end of 1st, 2nd and 3rd month, blood samples will be collected, their arterial function will be assessed, and any anxiety and depressive symptoms will be evaluated. The blood sample tests include endothelial microparticles (EMPs), endothelial progenitor cells (EPCs), liver function, kidney function, blood lipid, blood glucose and so on. Arterial function examination includes artery flow-mediated dilation (FMD) and brachial-ankle pulse wave velocity (baPWV). Anxiety and depressive symptoms would be evaluated by using GAD-7 and PHQ-9 score. The patients need to provide their peripheral blood to get their endothelial progenitor cells.

## **Intervention Type**

Drug

## **Phase**

Not Applicable

## **Drug/device/biological/vaccine name(s)**

Xinkeshu tablets

## **Primary outcome(s)**

1. Brachial arterial flow-mediated dilation measured using ultrasound at baseline, 4 weeks and 12 weeks
2. Brachial-ankle pulse wave velocity measured using a blood pressure measuring device at baseline, 4 weeks and 12 weeks
3. Anxiety assessed using the GAD-7 questionnaire at baseline, 4 weeks and 12 weeks
4. Depression assessed using the PHQ-9 questionnaire at baseline, 4 weeks and 12 weeks

## **Key secondary outcome(s)**

1. Endothelial microparticles measured using flow cytometry of peripheral blood samples taken at baseline, 4 weeks and 12 weeks
2. Quantity of endothelial progenitor cells measured using flow cytometry of peripheral blood samples taken at baseline, 4 weeks and 12 weeks
3. Blood pressure measured using a tronic sphygmomanometer (HEM-7071, OMRON, China) at baseline, 4 weeks and 12 weeks

## **Completion date**

01/09/2020

# **Eligibility**

## **Key inclusion criteria**

1. Aged 18-70 years
2. Diagnosed with hypertension and coronary artery disease and have received regular coronary heart disease secondary prevention drugs and antihypertensive drugs
3. Baseline GAD-7 and PHQ-9 score were both between 5-14 points
4. Have given written informed consent prior to study participation

## **Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

70 years

**Sex**

All

**Key exclusion criteria**

1. Severe liver or kidney dysfunction or malignant tumors
2. Allergic to any component of Xinkeshu tablet
3. Cardiovascular or cerebrovascular accident within previous 3 months
4. Pregnant or lactating women

**Date of first enrolment**

01/12/2019

**Date of final enrolment**

30/06/2020

**Locations****Countries of recruitment**

China

**Study participating centre**

**First Affiliated Hospital, Sun Yat-sen University**

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**Sponsor information****Organisation**

Shandong Wohua Pharmaceutical Co Ltd

# Funder(s)

## Funder type

Industry

## Funder Name

Shandong Wohua Pharmaceutical Co Ltd

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated and/or analysed during this study will be included in the subsequent results publication

## IPD sharing plan summary

Data sharing statement to be made available at a later date

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		19/07/2021	28/03/2023	Yes	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes