



Review Article

Protocol for Systematic Review of Controlled Trials of Korean and Chinese Herbal Treatments for Stroke



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ABSTRACT

Background: Many stroke patients receive traditional medical care in Korea and China. Stroke patients comprise the largest proportion of inpatients in traditional Korean medicine and traditional Chinese medicine hospitals. The purpose of this study is to identify the types and effects of Chinese medicine widely used in China and Korea, and to apply them to future studies of stroke.

Methods: Nine Korean and Chinese databases will be surveyed for clinical studies of herbal medicines for stroke, published between the inception of the database and August 2017. Clinical studies of decoctions or modified decoctions will be included without restriction on study type. The frequencies and patterns of formulas or single herb usage and the any type of herbal medicine utilization will be analyzed.

Dissemination: The results of the systematic review will be published in a peer-reviewed journal and disseminated electronically and in print. Updates of the review will be conducted to inform and guide healthcare practices.

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Introduction

Stroke is a leading cause of disability and death in China [1]. There is an estimated 33 million people with stroke, many of whom suffer from stroke-related disability [2]. In Korea, the second most common cause of death is stroke, and the treatment and management of stroke incur a large financial burden [3].

Stroke survivors often suffer from urinary incontinence, dysarthria, limbic paralysis, swallowing deficit, dysphasia, and consciousness disorder [4]. Unfortunately, there are no groundbreaking treatments for these symptoms. In Korea and China, herbal medicines have been used to treat the diverse symptoms of stroke since ancient times [5]. Herbal medicine treatment is widely known to be effective in the treatment of stroke. [6].

In past decades, there have been many studies in Korea and China on the effectiveness or efficacy of herbal medicines for

stroke in humans. However, recent changes in the health care system indicate that the two countries' use of herbal medicine is different.

In this review, we will investigate characteristics of clinical studies related to the usage of herbal formulas that are widely studied in traditional Korean medicine (TKM) and traditional Chinese Medicine (TCM) for the treatment of stroke symptoms. We will investigate the application of the pattern identification theory, which is used for usage of herbal medicines in the two countries, so that it can be used as the basis for future joint research.

Materials and Methods

Data sources

The following Korean and Chinese databases will be searched

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from their inception through to August 2017.

Korean databases

- Oriental Medicine Advanced Searching Integrated System (OASIS)
- Korean Traditional Knowledge Portal
- Korean Studies Information Service System (KISS)
- KoreaMed
- Korean Medical Database
- DBpia

Chinese databases

China National Knowledge Infrastructure (CNKI), i.e., China Academic Journal, China Doctoral Dissertations and Master's Theses Full Text Database, China Proceedings of Conference Full Text Database, Century Journal Project

- Wanfang
- VIP

Furthermore, we will conduct non-electronic searches of conference proceedings, of our own article files, and of nine Korean traditional medicine journals (Journal of Korean Medicine, Journal of the Korean Acupuncture and Moxibustion Society, Korean Journal of Acupuncture, Journal of Acupuncture and Meridian Studies, Journal of Pharmacopuncture, Journal of Oriental Rehabilitation Medicine, Journal of Korea Chuna Manual Medicine for Spine and Nerves, Korean Journal of Oriental Physiology and Pathology, and Journal of Korean Oriental Internal Medicine).

Study selection will be documented and summarized in a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) compliant flow chart (<http://www.prisma-statement.org>).

Search strategy

The search will be conducted in Korean, Chinese, and English using the following terms: stroke OR ischemic stroke OR cerebral infarction OR cerebral hemorrhage OR cerebrovascular accident (CVA) AND herbal medicine OR traditional medicine OR medicinal plant OR Korean medicine OR Chinese medicine.

Eligibility criteria

Population

Patients without limitations on age or sex will be included if they were diagnosed with stroke as confirmed by purely clinical features or by radiological examination (computed tomography, magnetic resonance imaging). Patients with ischemic and hemorrhagic stroke but not subarachnoid hemorrhage or subdural hematoma will be considered for inclusion in the review.

Interventions

Studies reporting any type of herbal medicine treatment; decoction, pill and granules will be included. Herbal medicine treatment could be used alone or combined with routine pharmacotherapy. Studies where the pharmacotherapy administered to the control group is different from the pharmacotherapy administered to the intervention group will be excluded. Trials in which the intervention group includes other TCM therapies in addition to herbal treatment (e.g., acupuncture, moxibustion, massage, tai chi) will be excluded. Also, herbal medicine which were not prescribed by TKM or TCM doctors will

be excluded.

Comparators

Comparators will include placebo control, no treatment, routine pharmacotherapy, routine care, and other conventional treatments including western drugs.

Characteristics of included studies

1. Type of herbal formula for stroke
2. Chief complaint of stroke treated by herbal medicine
3. Assessment of the effectiveness of each herbal medicine
4. Pattern type in response based on TKM or TCM theory
5. Range of dosage of herbal formulas
6. Duration of treatment (treatment period calculated according to symptoms)
7. Details of composition of formulas
8. Adverse events

Study design

To prevent the loss of data as far as possible, research methodology will not be restricted when selecting studies for inclusion. Hence, randomized controlled trials (RCTs) non-randomized controlled clinical trials (CCTs), will be included. All clinical studies will be included if they are studies of herbal medicine therapy, either as sole treatment or as an adjunct to other treatments.

Data extraction

The hard copies of all articles will be obtained and read in full. The selected studies will be classified into RCTs, CCTs, case series, and case reports according to study design. Two authors (YYL and JAL) will perform data extraction using a predefined data. From each study, information about the syndrome for which a prescription was used, the prescription, the prescribed medicine, and its action will be extracted. The data screening and selection process will be performed independently by an author (TYC) who is fluent in Chinese.

Data synthesis

SAS version 9.4 for Windows (SAS Institute Inc., Cary, NC, USA) will be used to analyze the frequencies and patterns of formulas or single herb usage and herbal medicine utilization. Categorical data will be presented as absolute numbers and percentages, and continuous data will be presented as means \pm standard deviations.

Discussion

Stroke is the leading cause of death worldwide. Therefore, there is much research on the diagnosis of stroke and its treatment [7–10]. In the field of traditional medicine, many studies on stroke have been conducted in China, Korea and other East Asian countries [11–13], which includes studies on the effectiveness of different types of herbal medicine for stroke [14,15]. Some herbal medicines appear to be effective for the prevention and treatment of stroke [16,17].

Both Korea and China use traditional medicine extensively, but the two countries do not have an up-to-date knowledge on their current state of research nor have they collaborated on research into this area. TCM and TKM have changed a lot in terms of different medical systems and laws. We intend to share basic information on herbal medicine treatment for stroke. The purpose

of this study is to identify the types and effects of TKM and TCM that are widely used in China and Korea, and to apply them to future studies of stroke, particularly in joint clinical research between Korea and China.

Ethics and dissemination

Given that this protocol is for a systematic review, ethics approval is not required. The findings of this review will be disseminated widely through peer-reviewed publications and conference presentations.

Conflicts of Interest

The authors declare that they have no competing interests.

Acknowledgments

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Contributions

JAL and YYL conceived the study, developed the criteria, searched the literature, performed data analysis and wrote the protocol. JAL, TYC and MMK conducted the preliminary search. BKK and MSL assisted in searching the Korean literature and extracting the data. YYL, HL and JJJ searched the Chinese literature and extracted the data. All authors read and approved the final manuscript.

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