

Clinical Efficacy of Modified Guizhi Decoction in Treating Wind-Cold Common Cold

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Abstract: *Objective:* To verify the clinical efficacy of modified Guizhi Decoction in treating wind-cold common cold. *Methods:* A total of 60 patients with wind-cold common cold were selected and divided into two groups: an observation group (30 cases) and a control group (30 cases). The observation group was treated with modified Guizhi Decoction, while the control group received conventional treatment. Indicators such as gender, age, disease course, severity of illness before and after treatment, and clinical efficacy were compared between the two groups. *Results:* Before treatment, there were no significant differences in gender, age, or disease course between the observation group and the control group ($P > 0.05$). The severity of illness was similar between the two groups before treatment, mainly concentrated in grades III to IV. After treatment, the total effective rate in the observation group was 96.67%, significantly higher than the 70.00% in the control group, and the difference was statistically significant ($P < 0.05$). The cure-markedly effective rate in the observation group was also significantly higher than that in the control group (23.33% vs. 6.67%). *Conclusion:* Modified Guizhi Decoction has good clinical efficacy in treating wind-cold common cold, significantly improving patient cure rates and improvement rates. Its widespread clinical application is recommended.

Keywords: Modified Guizhi Decoction; Wind-cold common cold; Clinical efficacy; Total effective rate

Online publication: March 16, 2026

1. Introduction

Wind-cold common cold, as one of the prevalent respiratory diseases, is widespread globally, especially during cold seasons. According to Traditional Chinese Medicine (TCM) theory, wind-cold common cold falls within the category of external contraction of wind-cold. Its primary cause is the invasion of external pathogenic factors into the human body, leading to dysfunction of the body's superficial defensive system. Traditional Chinese medical treatments have a long and effective history in preventing and treating such diseases. Among them, Guizhi Decoction is widely used as a fundamental formula for treating wind-cold common cold. Originating from the "Treatise on Cold Damage Diseases" (Shang Han Lun), Guizhi Decoction is composed of cinnamon twig (Guizhi), peony root (Baishao), licorice (Gancao), etc. It achieves therapeutic goals by promoting sweating to expel cold and regulating the nutrient-defense (ying-wei) system. Modern medical research also shows that Guizhi Decoction possesses particularly superior efficacy in treating wind-cold common cold. With the deepening of clinical practice, many physicians modify Guizhi Decoction based on the specific conditions of individual patients, hoping to enhance its efficacy^[1-3]. Regarding the clinical application of modified Guizhi Decoction,

this study established an observation group and a control group. Through a randomized controlled trial involving 60 patients with wind-cold common cold, the efficacy of the modified Guizhi Decoction formula for wind-cold common cold was investigated, thereby providing more reliable scientific evidence for its clinical application. By evaluating changes in patients before and after treatment, the total effective rate and markedly effective rate of the modified Guizhi Decoction formula were assessed, aiming to confirm its application value in modern treatment of wind-cold common cold and explore its broad clinical adaptability and potential for improvement.

2. Materials and methods

2.1. General information

This study was conducted from January 2023 to August 2023. Sixty patients diagnosed with wind-cold common cold and receiving treatment at our hospital were selected. Based on different treatment regimens, they were randomly divided into an observation group and a control group, with 30 patients in each group. A random number table method was used for grouping to ensure balance between the two groups for comparison. Selection criteria ensured that all patients were first-time visitors for wind-cold common cold and had not used any other related treatment methods or medications recently. The observation group included 14 males and 16 females, aged between 17 and 78 years, with an average age of 46 years. The disease course of wind-cold common cold in this group ranged from 5 to 14 days, with an average course of 10 days. The control group included 15 males and 15 females, aged between 18 and 74 years, with an average age of 48 years. The disease course ranged from 7 to 21 days, with an average course of 20 days. Statistical analysis of basic information such as gender, age, and disease course showed no statistically significant differences ($P > 0.05$), confirming comparability between the two groups and establishing a balanced foundation for subsequent comparative study of treatment effects.

2.2. Methods

A prospective, randomized comparative clinical trial design was adopted. A total of 60 patients with wind-cold common cold who visited the hospital between January 2023 and August 2023 were selected and divided into an observation group and a control group, with 30 patients in each group. Patients in both groups met the diagnostic criteria for wind-cold common cold, and those with other severe comorbidities were excluded. Before the experiment, detailed explanations of the study purpose and methods were provided, and informed consent was obtained from each patient.

The control group received standard treatment, specifically including antiviral drugs such as oseltamivir and necessary symptomatic treatment, such as antipyretics and analgesics. Patients in the control group were advised to follow the doctor's instructions, ensure adequate rest, and maintain an appropriate diet.

The observation group received, in addition to the same conventional treatment as the control group, additional treatment with modified Guizhi Decoction. Based on the original Guizhi Decoction, modifications were made according to the specific symptoms and individual constitution of each patient. The basic formula consisted of cinnamon twig (Guizhi), peony root (Shaoyao), ginger (Jiang), and jujube (Dazao).

For patients with a constitution leaning towards cold, aconite (Fuzi) was added to supplement yang and expel pathogenic factors. For those with significant phlegm-dampness, poria (Fuling) and atractylodes (Baizhu) were added to strengthen the spleen and dispel dampness. Adjustments in medication and dosage were made by experienced TCM physicians based on patient experience and changes in condition to ensure safety and efficacy. The treatment course was 3 days. During this period, patients underwent daily medical examinations to monitor disease progression, ensuring continuity and completeness of treatment.

Drug side effects or adverse reactions were recorded in detail and used to assess safety. The length of the disease course, changes in condition, and treatment efficacy were comprehensively evaluated. After treatment ended, follow-ups recorded patient recovery and any recurrence. Data recording and analysis were conducted strictly in accordance with clinical trial norms to ensure the impartiality and accuracy of the study.

2.3. Evaluation indicators and criteria

Evaluation indicators and criteria were established according to needs to ensure the accuracy and scientificity of the results. The following evaluation indicators were used to assess the clinical efficacy of modified Guizhi Decoction in treating wind-cold common cold.

The severity of the patient's illness was determined. Illness severity was divided into six grades, from Grade I to Grade VI, ranked according to the severity of the condition. Criteria for assessing illness severity were based on the patient's subjective symptoms and objective signs, including but not limited to fever, headache, general muscle soreness, nasal congestion, runny nose, and cough. The basic illness severity of all patients was summarized and recorded as data at initial diagnosis for efficacy comparison.

Medical efficacy evaluation indicators were used to analyze treatment outcomes and conduct specific measurements. Treatment outcomes were divided into four different levels: cured, markedly effective, effective, and ineffective. "Cured" meant all symptoms of the patient had disappeared. "Markedly effective" meant the patient's symptoms showed significant improvement, but some mild discomfort remained. "Effective" meant the patient's symptoms improved, but the degree of improvement was not obvious. "Ineffective" meant the patient's symptoms showed no improvement or even worsened. Based on relevant assessment criteria, the investigation focused on changes in the patient's condition to determine the specific efficacy level. Cure-markedly effective rate and total effective rate were selected as the main calculation indicators. Cure-markedly effective rate refers to the proportion of patients who met the criteria for cured and markedly effective. Total effective rate refers to the proportion of patients who met the criteria for cured, markedly effective, and effective. These two proportional data help more specifically determine the actual role and effect of the modified Guizhi Decoction regimen in medical practice.

2.4. Statistical methods

SPSS 22.0 software was used as the core data processing tool for statistical analysis. For measurement data conforming to a normal distribution, mean and standard deviation (Mean \pm SD) were used for description. The count data were presented as percentages (%). The statistical significance level was set at 0.05. When the *P*-value was less than 0.05, it was considered that there was a significant statistical difference between the two treatments.

3. Results

3.1. Comparison of gender, age, and disease course

The observation group and control group were similar in gender distribution, with close male-to-female ratios. In terms of age, the minimum and maximum age distributions of the two groups were close, and the average ages were also very similar. However, regarding the length of the disease course, the average course in the observation group was significantly shorter than that in the control group, indicating a shorter time from treatment initiation to efficacy manifestation. The difference was statistically significant ($P < 0.05$) (Table 1).

Table 1. Comparison results of gender, age, and disease course between the two groups

Group	Cases (n)	Gender		Age (Years)			Disease course (Days)		
		Male	Female	Min	Max	Mean	Shortest	Longest	Mean
Observation Group	30	14	16	17	78	46	5	14	10
Control Group	30	15	15	18	74	48	7	21	20
		χ^2/t							
		0.143		0.743			0.041		
		<i>P</i>		0.703			0.453		
							0.831		

3.2. Comparison of illness severity

Before treatment, the distribution of illness severity among patients with wind-cold common cold in the two groups was similar, with both primarily at Grades III and IV.

This indicates that the two groups were comparable in terms of illness severity before treatment, providing a basis for subsequent comparison of treatment effects. Specific data are detailed in **Table 2**.

Table 2. Comparison results of illness severity between the two groups

Group	Cases (n)	Before Treatment					
		I	II	III	IV	V	VI
Observation Group	30	0	0	14	10	3	3
Control Group	30	0	0	13	12	2	3
χ^2				0.191			
P				0.661			

3.3. Comparison of clinical efficacy

The clinical efficacy of the observation group was significantly better than that of the control group. The cure-markedly effective rate in the observation group reached 23.33%, while it was only 6.67% in the control group. In terms of total effective rate, the observation group also performed better, reaching 96.67%, compared to 70.00% in the control group. The difference was statistically significant ($P < 0.05$) (**Table 3**).

Table 3. Comparison of clinical efficacy between the two groups ($n=30$) cases

Group	Cured	Markedly Effective	Effective	Ineffective	Cure-Markedly Effective Rate/%	Total Effective Rate/%
Observation Group	3	4	22	1	23.33	96.67
Control Group	0	3	18	9	6.67	70.00
χ^2						5.191
P						0.021

4. Discussion

The modified Guizhi Decoction formula evolved from traditional TCM theory and is primarily used to treat wind-cold common cold. By comparing the efficacy of patients in the observation group and the control group after treatment with modified Guizhi Decoction, significant differences in efficacy were observed. In terms of the basic characteristics of the two groups of patients, the observation group and the control group had similarities in gender distribution, age range, and disease course. The observation group had 14 males and 16 females, aged from 17 to 78 years, with an average age of 46 years. The control group had 15 males and 15 females, aged from 18 to 74 years, with an average age of 48 years. This indicates excellent uniformity in baseline conditions between the two groups, providing a fair foundation for subsequent efficacy comparison.

By conducting a comparative study of the pre-treatment illness severity of patients in the observation group and the control group, the therapeutic effectiveness of the modified Guizhi Decoction method in treating wind-cold common cold was further confirmed. From Table 2, it can be seen that the distribution of illness severity between the observation

group and the control group was similar, ensuring comparability of the data and providing a balanced basis for evaluating subsequent treatment outcomes. There were no patients in either the observation group or the control group with Grade I or II illness severity, indicating that all participants initially had moderate or above severity of wind-cold common cold. Most patients were concentrated in Grade III and IV illness severity, reflecting that the initial condition of the patients was generally relatively severe. This provided quite a rigorous test condition for the efficacy of the modified Guizhi Decoction method^[4-7].

According to **Table 3**, the observation group outperformed the control group in terms of cure rate, markedly effective rate, and total effective rate. Particularly in the cure-markedly effective rate, the observation group was 23.33%, while the control group was only 6.67%, demonstrating the significant improvement effect of the modified Guizhi Decoction method on the condition. Regarding the total effective rate, the observation group was 96.67%, and the control group was 70.00%, further confirming the advantage of the modified Guizhi Decoction method in enhancing the therapeutic efficacy of wind-cold common cold. Integrating the initial diagnosis data on illness severity with post-treatment outcome comparisons, it can be inferred that the therapeutic efficacy of the modified Guizhi Decoction method is not only reflected in alleviating patient symptoms but may also lie in its role in reducing the disease course and optimizing disease outcome. In TCM theory, Guizhi Decoction achieves the goal of treating wind-cold common cold by dispelling wind and cold. Guizhi Decoction plays an important role in the traditional treatment of wind-cold common cold, and with the support of clinical data, the modern medical value of modified Guizhi Decoction in treating wind-cold common cold is demonstrated. Research indicates that in modern medicine's treatment of wind-cold common cold, selecting appropriate medications can bring better therapeutic effects. Traditional Chinese medicine is advancing towards modernization and has received strong support^[8-10].

In exploring the efficacy of the modified Guizhi Decoction regimen for treating wind-cold common cold, innovativeness was demonstrated. The scientific method of randomized controlled trials was used to meticulously examine the treatment outcomes of the modified Guizhi Decoction regimen, making the research conclusions reliable and convincing. Tailored treatment adjustments were made based on the specific illness details and physical condition of each patient, fully reflecting the TCM treatment philosophy of individualized and targeted medication, thereby making the treatment more precise. The research work not only focused on whether the overall treatment outcome was ideal but also deeply analyzed the proportion of patients achieving complete recovery and significant improvement, comprehensively examining the actual clinical effect of the modified Guizhi Decoction regimen. Ensuring accurate data, it aimed for scientific rigor in conclusions.

The current research integrates the traditional theories of TCM with the scientific methods of modern medicine, providing solid support for the modernization path of traditional Chinese medicine and reflecting the unique approach of integrated Chinese and Western medicine research. In exploring the actual efficacy of modified Guizhi Decoction in treating wind-cold common cold, some issues and shortcomings were identified. The selected number of patients was relatively small, only 60 in total, which may affect the generalizability and promotion value of the research results. The duration of the study was also relatively short, only 8 months, making it difficult to fully understand long-term usage effects and safety. Furthermore, the study was not conducted as a multi-regional, multi-hospital collaborative study, which may limit the generalizability of the results due to differences in regional and hospital environmental conditions. Although drug side effects were recorded, detailed research on the specific causes of adverse reactions was not conducted, nor were practical preventive measures proposed. Finally, this study did not set up comparison groups with different modified formula variants, making it difficult to precisely evaluate the specific contribution of each added or subtracted herb to the efficacy. Future research needs to expand sample size, extend observation time, conduct multicenter collaborations, and refine adverse reaction analysis to further verify and improve the efficacy of modified Guizhi Decoction in treating wind-cold common cold.

Through the comparison of patients in the observation group and the control group, modified Guizhi Decoction demonstrated significant clinical efficacy in treating wind-cold common cold, especially showing substantial improvements

in cure rate and effective rate. This verifies the application value of Chinese medicine in the modern medical system and suggests that more consideration can be given to the comprehensive regulation and individualized treatment strategies of Chinese medicine when facing various clinical diseases. It is hoped that future research will further explore the specific mechanisms and broader clinical applications of modified Guizhi Decoction, contributing to the comprehensive improvement of disease treatment efficiency and patient satisfaction.

Disclosure statement

The author declares no conflict of interest.

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