

Clinical Observation of the Efficacy of a Customized Prescription from the Jing Ethnic Group in Treating Children with Yang Syndrome of Common Cold

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Abstract

Objective: This paper aims to observe the clinical efficacy of a customized prescription from the Jing ethnic group in treating children with Yang syndrome of common cold. **Methods:** A total of 160 patients diagnosed with Yang syndrome of common cold at the pediatric outpatient clinic of Fangchenggang City Traditional Chinese Medicine Hospital from September 2023 to September 2024 were selected and randomly divided into a control group and an observation group, each with 80 cases. The control group was orally administered Compound Paracetamol, Chlorphenamine Maleate, and Caffeine Oral Solution, while the treatment group received the customized prescription from the Jing ethnic group in addition to the treatment given to the control group. Both groups were treated for three days. During the treatment period, if the axillary temperature of the children in both groups reached or exceeded 39.0°C, Dexibuprofen Oral Solution could be additionally administered. The time of antipyretic onset, the interval before axillary temperature rebounded within 24 hours after the first antipyretic effect, and the highest axillary temperatures on the 1st, 2nd, and 3rd days were compared between the two groups, as well as their therapeutic effects. **Results:** Compared with the control group, the treatment group had an earlier onset of antipyretic effect ($P < 0.05$), a longer interval before axillary temperature rebounded within 24 hours after the first antipyretic effect ($P < 0.05$), lower highest axillary temperatures on the 1st, 2nd, and 3rd days ($P < 0.05$), and a higher overall effective rate of 95.00%, which was better than the 80.00% of the control group ($P < 0.05$). **Conclusion:** The customized prescription from the Jing ethnic group

for treating children with Yang syndrome of common cold has a rapid onset, a lasting antipyretic duration, and excellent efficacy without significant adverse reactions, making it worthy of clinical promotion.

Keywords

Pediatric Common Cold, Yang Syndrome, Jing Ethnic Medicine, Efficacy

1. Introduction

Common cold is a frequent pediatric disease, a lung-related illness caused by external wind pathogens, characterized primarily by fever, chills, nasal congestion, rhinorrhea, sneezing, coughing, headache, and general body aches [1], equivalent to “acute upper respiratory tract infection” in Western medicine. Most cases are due to viral infections, with a minority caused by bacterial infections [2], and can occur throughout the year. Over a long period, the Jing ethnic people have accumulated rich experience in treating pediatric common colds, and the following clinical data are organized accordingly.

2. Clinical Data

2.1. Diagnostic Criteria for Western Medicine

The diagnostic criteria for “acute upper respiratory tract infection” as outlined in Pediatrics [3] were referred to: 1) Local symptoms: a) Nasal congestion; b) Rhinorrhea; c) Dry cough; d) Sore throat or pharyngalgia. 2) Systemic symptoms: a) Fever; b) Headache; c) General body aches; d) Fatigue; e) Restlessness. 3) Laboratory tests: In viral infections, the total white blood cell count is normal or low, and neutrophils are reduced; in bacterial infections, the total white blood cell count may increase, and neutrophils increase. Diagnosis can be made if there are two local symptoms plus one systemic symptom.

2.2. Diagnostic Criteria for Jing Ethnic Syndrome Differentiation

The diagnostic criteria for Yang syndrome as outlined in Jing Ethnic Medicine [4] were referred to Yang syndrome: severe fever, mild chills, little sweating, headache, limb soreness and fatigue, yellow sputum cough, red and swollen throat, dry mouth with thirst, thin yellow tongue coating, and floating rapid pulse.

2.3. Inclusion Criteria

1) Age between 1 and 10 years old; 2) Axillary temperature $\geq 37.5^{\circ}\text{C}$; 3) Disease course within 48 hours; 4) Parents informed and consented to participate and signed the informed consent form.

2.4. Exclusion Criteria

1) Chest X-ray indicating pneumonia; 2) History of epilepsy or febrile seizures, or

occurrence of convulsions; 3) Severe liver, kidney, heart diseases, or immune abnormalities; 4) Allergy to any component of the drugs used in this study; 5) Previous related treatment before enrollment.

2.5. General Information

A total of 160 children with Yang syndrome of common cold who visited the pediatric department of Fangchenggang City Traditional Chinese Medicine Hospital from September 2023 to September 2024 were selected and divided into a control group and a treatment Group, each with 80 cases, according to the random number table method. There was no statistically significant difference in gender, age, highest body temperature, and average disease course between the two groups (all $P > 0.05$), indicating comparability. This study has been reviewed and approved by the Ethics Committee of Fangchenggang City Traditional Chinese Medicine Hospital.

3. Methods

3.1. Treatment Methods

3.1.1. Control Group

Oral administration of Compound Paracetamol, Chlorphenamine Maleate, and Caffeine Oral Solution (Jiangxi Heying Pharmaceutical Co., Ltd., specification: 10 mL/bottle, batch number: 20220605). Dosage: 2.5 mL per dose for children aged 1 - 4 years; 5 mL per dose for children aged 5 - 10 years. Three times daily for three days.

3.1.2. Treatment Group

In addition to the treatment provided to the control group, the customized prescription from the Jing ethnic group was also administered.

Composition of the drug: Jin Zhan Yin Pan 10 g, Jin Yin Hua 10 g, Niu Jin Cao 10 g, Huang Guo Ye 5 g, Yu Xin Cao 3 g, Dong Feng Jie 10 g, Yi Dian Hong 10 g. Decoct in water to obtain 200 ml, to be taken warm, three times daily. The above formula is the standard dosage for children aged 5 - 7 years, and the dosage can be adjusted based on the child's age, weight, severity of the condition, etc.

During the treatment period, if the axillary temperature of the children in both groups reached or exceeded 39.0°C, Dexibuprofen Oral Solution (Hubei Weisen Pharmaceutical Co., Ltd., specification: 60 mL/bottle, batch number: 20220703) could be additionally administered. Dosage: 0.25 mL/kg per dose for children aged 1 - 6 years, with a maximum daily dose of 15 mL; 7.5 mL per dose for children older than 6 years, up to three times daily.

3.2. Observation Indicators

3.2.1 Antipyretic Time

Observation and recording of the antipyretic onset time and the interval before axillary temperature rebounded within 24 hours after the first antipyretic effect for the children in both groups.

3.2.2. Highest Axillary Temperature

Measurement of the highest axillary temperature of the children in both groups on the 1st, 2nd, and 3rd days. Specific monitoring operations for axillary temperature: If $T \geq 39.0^{\circ}\text{C}$, measure every 0.5 hours; if $38.0^{\circ}\text{C} \leq T < 39.0^{\circ}\text{C}$, measure every hour; if $37.3^{\circ}\text{C} \leq T < 38.0^{\circ}\text{C}$, measure every two hours; if $T < 37.3^{\circ}\text{C}$, measure every four hours, taking the highest measured axillary temperature.

3.2.3. Criteria for Judging Efficacy

1) Cure: After three days of medication, clinical symptoms and signs disappeared or were basically gone, and the reduction rate of syndrome score was $\geq 95\%$; 2) Markedly Effective: After three days of medication, clinical symptoms and signs significantly improved, with a reduction rate of syndrome score between 70% and 95%; 3) Effective: After three days of medication, clinical symptoms and signs improved, with a reduction rate of syndrome score between 30% and 70%; 4) Ineffective: After three days of medication, clinical symptoms and signs did not significantly improve or even worsened, with a reduction rate of syndrome score less than 30%.

Reduction rate of syndrome score = (pre-treatment syndrome score – post-treatment syndrome score)/pre-treatment syndrome score $\times 100\%$.

Overall effectiveness rate = (cured + markedly effective + effective) cases/total number of cases $\times 100\%$.

3.2.4. Use of Ibuprofen

If Dexibuprofen Oral Solution was additionally administered during the treatment period for the children in both groups, it counted as one case.

3.3. Statistical Methods

All data in this study were analyzed using SPSS 25.0 software. For quantitative data, independent samples t-tests were used to compare differences between the two groups. For categorical data, chi-square tests (χ^2 tests) were employed to assess differences between the two groups. All hypothesis tests were conducted with a two-tailed P-value of less than 0.05 considered statistically significant.

4. Results

4.1. Comparison of Antipyretic Onset Time, Interval before Axillary Temperature

Rebounded Within 24 Hours After the First Antipyretic Effect, and Highest Axillary Temperatures on the 1st, 2nd, and 3rd Days Between the Two Groups Compared with the control group, the observation group showed a significantly shorter antipyretic onset time, a significantly longer interval before axillary temperature rebounded within 24 hours after the first antipyretic effect, and significantly lower highest axillary temperatures on the 1st, 2nd, and 3rd days, with statistically significant differences ($P < 0.05$) (see **Table 1**).

Table 1. Comparison of antipyretic onset time, interval before axillary temperature rebounded within 24 hours after the first antipyretic effect, and highest axillary temperatures on the 1st, 2nd, and 3rd days between the two groups (n = 80).

Group	Antipyretic Onset Time (h)	Interval before Axillary Temperature Rebounded Within 24 Hours after the First Antipyretic Effect (h)	Highest Axillary Temperatures in the First 3 Days (°C)		
			Highest Axillary Temperature on Day 1	Highest Axillary Temperature on Day 2	Highest Axillary Temperature on Day 3
			1	2	3
Treatment Group	1.34 ± 0.31	14.52 ± 5.56	37.22 ± 0.36	36.91 ± 0.40	36.52 ± 0.32
Control Group	1.66 ± 0.34	10.22 ± 5.14	38.10 ± 0.78	37.60 ± 0.52	37.20 ± 0.78

4.2. Comparison of Efficacy between the Two Groups

The efficacy rate of the treatment group was significantly better than that of the control group, with a statistically significant difference ($P < 0.05$) (see **Table 2**).

Table 2. Comparison of efficacy between the two groups (n = 80).

Group	Cured	Markedly Effective	Effective	Ineffective	Overall Efficacy Rate (%)
Treatment Group	26	40	10	4	95.00
Control Group	18	24	22	16	80.00

4.3. Comparison of the Number of Cases Using Dexibuprofen Oral Solution

Between the Two Groups Compared with the control group, the number of cases using Dexibuprofen Oral Solution in the treatment group was significantly reduced, with a statistically significant difference ($P < 0.05$) (see **Table 3**).

Table 3. Comparison of the number of cases using Dexibuprofen oral solution between the two groups (n = 80).

Group	Day 1	Day 2	Day 3	Total Cases
Treatment Group	22	0	0	22
Control Group	24	4	2	30

4.4. Adverse Reactions

No abdominal pain, bloating, nausea, vomiting, poor appetite, indigestion, or rash occurred in either group during the treatment process.

5. Discussion

The Jing ethnic group is a small ethnic minority in southern China, mainly engaged in marine fisheries, primarily distributed on the “three islands of the Jing ethnic group” in Jiangping Town, Dongxing City, Guangxi. Their living areas are surrounded by the sea, and the special island environment has enabled the Jing ancestors to gradually accumulate and summarize valuable medical experiences

in the struggle against diseases. Therefore, Jing ethnic medicine has unique advantages in treating some common and difficult diseases locally.

Relying on ethnic wisdom, the Jing people have accumulated experience over the course of history, continuously exploring effective remedies, gradually forming Jing ethnic characteristic therapies [5], giving Jing ethnic medicine unique advantages in treating some internal and external pediatric diseases. However, Jing ethnic medicine has not formed a systematic theoretical system; instead, it uses knowledge structures dominated by traditional Chinese medicine and Western medicine, supplemented by traditional folk therapies for disease treatment. Coupled with the impact of modern medicine, the accumulated prescriptions and empirical formulas are gradually being forgotten, and many medicinal experiences have yet to be excavated and organized before they face the risk of being lost, making rescue and excavation work urgent [6].

This project focuses on pediatric common cold, a disease where Jing ethnic medicine has a clear advantage, deeply digging into and exploring the advantages of Jing ethnic medicine, collecting, summarizing, and categorizing them, providing references for the diagnosis and treatment of Jing ethnic medicine in clinical practice, offering more therapeutic ideas for medical clinics, and gaining more attention from all sectors of society to promote the development of Jing ethnic medicine. Through this study, it is known that both groups can effectively reduce fever, but the treatment group performs better in terms of antipyretic onset time, the speed of temperature decrease at various time points, and efficacy. Given that children often have insufficient spleen function, they do not know how to regulate their diet, and after being affected by pathogens, lung disease affects the spleen, leading to dysfunction in the spleen and stomach, food stagnation, and heat accumulation, aggravating the heat pathogen and prolonging the disease course. At the same time, excessive cold drugs can harm the spleen and stomach. And the addition of Jin Zhan Yin Pan, which has the effects of clearing heat and detoxifying, cooling blood, and stopping bleeding, is suitable for symptoms such as fever and sore throat. Jin Yin Hua has the effects of clearing heat and detoxifying, and dispersing wind-heat, and is commonly used to treat symptoms like colds and fever. The inclusion of Niu Jin Cao, which strengthens the spleen and harmonizes the middle, promotes digestion and relieves digestive symptoms, can shorten the course of illness and promote recovery. The results show that the treatment group had a significantly longer duration of antipyretic effect, prevented the recurrence of fever, and maintained a more sustained antipyretic effect, thereby reducing the discomfort of the patients.

In summary, this study systematically evaluated the effectiveness and safety of Jing Ethnic medicine in treating pediatric Yang-type common cold. Through a randomized controlled trial design, potential confounding factors and biases were strictly controlled, ensuring the scientific validity and reliability of the research results. The findings not only provide new options for clinical treatment but also offer scientific evidence for the development of Jing Ethnic medicine.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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