Observation on the Clinical Efficacy of Zuojin Yifan Granules in the Treatment of Reflux Esophagitis (Liver Stomach Stagnation Heat Syndrome)

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Abstract: Objective: To observe the clinical efficacy of Zuojin Yifan Granules in the treatment of reflux esophagitis (liver stomach stagnation heat syndrome). Method: 108 patients with reflux esophagitis (liver stomach stagnation heat syndrome) were randomly divided into Group A, Group B, and Group C using a random number table, with 36 patients in each group. Group A received treatment with Zuojin Yifan Granules, Group B received treatment with Zuojin Yifan Granules combined with rabeprazole, and Group C received treatment with rabeprazole for 8 weeks. Clinical symptom scores between groups and within groups were compared, and the improvement of clinical symptoms and changes in esophageal mucosa under endoscopy were observed in patients. Result: Before treatment, there was no statistically significant difference in clinical symptom scores among the three groups (P>0.05). After treatment, the clinical symptom scores of the three groups improved compared to before treatment. The clinical symptom scores of Group B were lower than those of Group A and Group C (P<0.05), and the clinical symptom scores of Group A were lower than those of Group C (P<0.05). The total effective rate of clinical symptom improvement in Group B was higher than that in Group A (P<0.05), and the total effective rate of clinical symptom improvement in Group A after treatment was higher than that in Group C (P<0.05). The total effective rate of endoscopic efficacy in Group B was higher than that in Group A (P<0.05), and the total effective rate of endoscopic efficacy in Group A was higher than that in Group C (P<0.05). Conclusion: The clinical effect of Zuojin Yifan Granules in the treatment of reflux esophagitis (liver stomach stagnation heat syndrome) is ideal, which can significantly improve clinical symptoms and enhance the endoscopic efficacy of patients.

***Keywords*:** Zuojin Yifan Granules, reflux esophagitis, liver and stomach stagnation heat syndrome

1. Introduction

Reflux esophagitis (RE) primarily manifests as heartburn and reflux symptoms. This condition arises from abnormal reflux of gastric and duodenal contents into the esophagus. Beyond typical esophageal symptoms, it may also involve adjacent structures such as the pharynx and airway [1]. Modern medical research reveals that its pathogenesis involves multiple factors, including lower esophageal sphincter dysfunction, abnormal esophageal and gastric motility, and transient LES relaxation [2]. Notably, prolonged reflux can induce a series of pathological changes in the gastric mucosa, including atrophic lesions, bleeding, intestinal metaplasia, and even the risk of malignant transformation. Furthermore, with changes in modern lifestyles, the incidence of this disease continues to rise, making it a significant digestive system disorder affecting public health [3]. Currently, proton pump inhibitors serve as the first-line treatment in Western medical practice.

Traditional Chinese medicine classifies RE under the category of "acid regurgitation disease" for pattern differentiation and treatment. Qing Dynasty physician Li Yongcui incisively discussed in "Comprehensive Supplement to Diagnosis and Treatment: Acid Regurgitation": "Accumulation and stagnation in the middle jiao... thus causing acid regurgitation." Treatment principles focus on clearing heat, soothing the liver, harmonizing the stomach, and alleviating counterflow [4]. Recent clinical studies indicate significant advantages of TCM in managing this condition. Based on this, the present study aims to systematically evaluate the clinical efficacy of Zuojin Yifan Granules for reflux esophagitis with liver-stomach heat stagnation syndrome. The findings are reported below.

2. Materials and Methods

2.1 General Data

A total of 108 patients with reflux esophagitis (pattern of liver-stomach heat stagnation) who visited the Department

of Hepatobiliary and Gastrointestinal Diseases at Ningxia Hui Autonomous Region Hospital of Traditional Chinese Medicine (Academy of Traditional Chinese Medicine) between January 2022 and December 2023 were enrolled. Patients were sequentially numbered and randomly assigned using a random number table to three groups: Group A (Zuo Jin Yi Fan Granules monotherapy), Group B (Zuo Jin Yi Fan Granules combined with rabeprazole), and Group C (rabeprazole monotherapy), each comprising 36 patients. Group A included 20 males and 16 females, with a mean age of (53.4 ± 6.7) years; Group B: 22 males, 14 females, mean age (54.8 ± 5.9) years; Group C: 19 males, 17 females, mean age (54.1 ± 6.9) years. Comparisons of general characteristics among the three groups showed no statistically significant differences ($P > 0.05$).

2.2 Inclusion Criteria

Patients met the 2017 Chinese Consensus on Integrated Traditional and Western Medicine Diagnosis and Treatment of Gastroesophageal Reflux Disease, the Chinese Consensus on Gastroesophageal Reflux Disease established by the Digestive Diseases Branch of the Chinese Medical Association, and the 1994 Los Angeles Endoscopic Classification System. Age range: 18–65 years; no gender restrictions, able to take medication as prescribed, diagnosed by gastroscopy, no history of gastric surgery, no allergy to the study medications (rabeprazole and Chinese herbal medicine), TCM pattern diagnosis of liver-stomach heat stagnation, no other severe complications or chronic diseases, and signed informed consent.

2.3 Exclusion Criteria

① Reflux esophagitis exceeding Grade C severity; ② Patients with severe primary diseases in other systems or psychiatric disorders; ③ Primary diseases of the circulatory or nervous systems; ④ Pregnant or lactating women; ⑤ Individuals with allergic constitutions or allergies to multiple medications.

2.4 Methods

Group A received Zuojin Yifan Granules; Group B received Zuojin Yifan Granules combined with rabeprazole; Group C received rabeprazole alone. Zuojin Yifan Granules were provided by the Preparations Department of Ningxia Hui Autonomous Region Hospital of Traditional Chinese Medicine and Research Institute of Traditional Chinese Medicine. Ingredients: Coptis rhizome 6g, processed Evodia fruit 1g, wheat-roasted Atractylodes rhizome 14g, dried tangerine peel 10g, Pinellia ternata (processed with ginger) 10g, Citrus aurantium (fried with bran) 10g, Fermented malt 14g, Poria cocos 14g, Fritillaria thunbergii 10g, Sepia ossis 10g, Taraxacum officinale 14g, Panax notoginseng 3g, Bupleurum chinense (processed with vinegar) 10g, Scutellaria baicalensis 10g, Bletilla striata 10g, Glycyrrhiza uralensis (fried) 6g. Administration: Prepare as granules. Take one packet twice daily. One treatment course consists of 4 weeks; administer two consecutive courses. Lansoprazole enteric-coated capsules: 20mg once daily. One treatment course consists of 4 weeks; administer two consecutive courses.

2.5 Observation Indicators

Clinical symptom scoring: Assessed according to the "Guidelines for Clinical Research of New Traditional Chinese Medicines." TCM Syndrome Efficacy Assessment: Refer to the "Guidelines for Clinical Research of New Traditional Chinese Medicines." Gastroscopy Efficacy Assessment: Efficacy determined by gastroscopy scores before and after treatment.

2.6 Statistical Methods

SPSS 26.0 software was used for analysis. The enumeration data were expressed as number (%) and analyzed using the chi-square test. Quantitative data were expressed as mean±SD and analyzed by t-test. $P<0.05$ indicates statistically significant difference.

3. Results

3.1 Comparison of Clinical Symptom Scores Before and After Treatment Among Groups

Before treatment: No statistically significant differences were observed among the three groups ($P>0.05$). After treatment: Clinical symptom scores improved in all three groups compared to pre-treatment levels. Group B exhibited lower post-treatment clinical symptom scores than Groups A and C ($P<0.05$), while Group A showed lower scores than Group C ($P<0.05$). See Table 1.

Table 1. Comparison of Clinical Symptom Scores Before and After Treatment Among the Three Groups ($\bar{x}\pm s$)

Group	Number of Cases	Before Treatment	After Treatment
Group A	36	7.2±1.03	3.1±0.74*
Group B	36	7.1±0.99	2.0±0.94*#
Group C	36	7.4±0.96	4.2±0.92*#&

Note: *P < 0.05 compared with pre-treatment in this group; #P < 0.05 compared with post-treatment in Group A; &P < 0.05 compared with post-treatment in Group B.

3.2 Comparison of Clinical Symptom Improvement Rates Among Groups

Group B demonstrated a higher overall effective rate for clinical symptom improvement than Group A (P < 0.05). Group A showed a higher overall effective rate for clinical symptom improvement than Group C after treatment (P < 0.05). See Table 2.

Table 2. Comparison of Clinical Symptom Improvement Among 3 Groups [n (%)]

Group	Number of Cases	Treatment Effect				Overall Response Rate
		Clinical Cure	Marked Improvement	Effective	No Effect	
Group A	36	2 (5.6)	17 (47.2)	11 (30.6)	6 (16.7)	83.3
Group B	36	5 (13.9)	25 (69.4)	4 (11.1)	2 (5.6)	94.4
Group C	36	1 (2.8)	15 (41.6)	10 (27.8)	10 (27.8)	72.2

3.3 Comparison of Endoscopic Efficacy Among Groups

The total effective rate of endoscopic efficacy in Group B was higher than that in Group A (P < 0.05), and the total effective rate in Group A was higher than that in Group C (P < 0.05).

Table 3. Comparison of Endoscopic Efficacy Among the Three Groups [n (%)]

Group	Number of Cases	Treatment Effect				Overall Response Rate
		Cure	Marked Improvement	Effective	No Effect	
Group A	36	2 (5.6)	15 (41.7)	14 (38.9)	5 (13.9)	86.1
Group B	36	4 (11.1)	19 (52.8)	11 (30.6)	2 (5.6)	94.4
Group C	36	2 (5.6)	10 (27.8)	11 (30.6)	13 (36.1)	63.9

4. Discussion

Reflux esophagitis (RE) fundamentally arises from an imbalance between esophageal defense mechanisms and aggressive factors from gastric and duodenal contents. Its pathogenesis is associated with dysfunction of the anti-reflux barrier, reduced esophageal clearance capacity, weakened esophageal defense mechanisms, enhanced aggressive factors, increased esophageal sensitivity, immune-mediated esophageal mucosal inflammation, acid-dependent theory, gastrointestinal dysfunction, psychological factors, lifestyle, and anatomical abnormalities. Long-term acid suppression may cause B12 malabsorption, leading to anemia and neurological issues, magnesium deficiency, and impaired iron and calcium absorption. It also increases infection risks, such as Clostridium difficile infections, and aspiration into the respiratory tract during reflux, elevating the risk of community-acquired pneumonia. It also elevates fracture risk, renal impairment, and other potential hazards including dementia, gut microbiota alterations, and impaired absorption/efficacy of medications like clopidogrel and certain antifungals [5]. Traditional Chinese Medicine (TCM) demonstrates unique therapeutic advantages in managing this condition. The Qingyu Hejiang Decoction alleviates esophageal mucosal damage by modulating the LPS/TLR4/NF-κB signaling pathway 6; formulas that soothe the liver, promote gallbladder function, and regulate the stomach downregulate IL-8 receptor expression [7]; and the Xuanfu Dazhe Decoction combined with acupoint embedding therapy significantly relieves clinical symptoms in patients with liver-stomach disharmony syndrome [8].

Currently, integrated Chinese and Western medicine treatment for RE has become an effective model, leveraging complementary strengths: ① Treating symptoms in acute cases while addressing root causes in chronic cases: During acute or severe esophagitis, PPIs rapidly control symptoms and promote mucosal healing. Concurrently, TCM regulates systemic conditions by fundamentally adjusting organ functions—such as soothing the liver and strengthening the spleen—to reduce recurrence. ② Mitigating side effects of Western medications: Long-term PPI use carries potential risks. TCM aids in

gradually reducing PPI dosage and dependence during maintenance therapy. ③ Treating refractory GERD: For patients unresponsive to PPIs, TCM employs syndrome differentiation based on factors like “depression,” “heat,” “phlegm,” and “stasis,” often yielding unexpected results. ④ Holistic mind-body treatment: TCM emphasizes emotional factors, offering unique advantages in alleviating anxiety and depression—aligning with brain-gut axis theory. In Zuojin Yifan Granules, Coptis chinensis (Huanglian) clears heat and reduces fire, while Evodia rutaecarpa (Wuzhuyu) regulates the liver and relieves depression. Their combined action balances cold and heat, jointly achieving liver-clearing, fire-reducing, and vomiting-suppressing effects [9]. This formula further incorporates Pinellia ternata (Banxia) and Citrus reticulata peel (Chenpi) to dry dampness, transform phlegm, regulate qi, and harmonize the stomach; Atractylodes macrocephala (Baizhu) and Poria cocos (Fuling) strengthen the spleen and eliminate dampness. Squid bone, primarily composed of calcium carbonate, exhibits potent acid-suppressing and gastric mucosa-protective properties. Zhebei (Zhejiang fritillary bulb) clears heat, transforms phlegm, and disperses stagnation; its combination with squid bone enhances acid suppression and pain relief. Chaihu (Bupleurum root) regulates liver qi and alleviates depression. Scutellaria baicalensis clears and drains liver and gallbladder heat. Together, they excel at resolving liver qi stagnation and heat accumulation caused by emotional distress. Taraxacum officinale clears heat and detoxifies, offering potent anti-inflammatory and anti-Helicobacter pylori effects; Fructus Aurantii Immaturus regulates qi and relieves epigastric fullness. Combined with Atractylodes macrocephala, it forms “Zhi Zhu Wan” to enhance spleen-stomach transformation, eliminating epigastric distension. Sanqi promotes blood circulation, removes blood stasis, stops bleeding, and alleviates pain. It improves gastric blood flow, eliminates stasis, and promotes tissue repair, proving highly effective for gastric disorders involving pain or potential bleeding points. Baji, with its viscous nature, astringes to stop bleeding, promotes tissue regeneration, and reduces swelling. Shenqu fortifies the spleen and aids digestion. Licorice harmonizes the formula. This ingeniously designed prescription incorporates elements from the liver-soothing and fire-clearing Zuojin Pill, the spleen-strengthening and dampness-expelling Erchen Decoction and Yigong Powder, while adding the modern gastric treatment combination Wu Bei Powder and mucosal-repairing components Bletilla and Panax notoginseng. It addresses both symptoms and root causes, combining purgative and tonifying actions. Wang Lina et al. [10] confirmed that Chaihu Shugan San combined with Zuojin Pill alleviates symptoms in patients with liver-stomach heat stagnation syndrome. Animal studies demonstrated that this combination reduces esophageal inflammation and protects ICC cells [11]. Our findings show that the treatment group (Group A) exhibited significantly lower symptom scores and higher overall response rates than the control group (Group C) ($P < 0.05$), consistent with the aforementioned research.

Modern pharmacological research substantiates the efficacy of Zuojin Yifan Granules, confirming synergistic effects among multiple formula constituents. Coptis chinensis' primary active component is alkaloids, with berberine being the most significant and abundant. Berberine exhibits antibacterial, antiviral, anti-inflammatory, lipid-regulating, hypoglycemic, antiarrhythmic, vasoprotective, gastric mucosal protective, antidiarrheal, antitumor, and neuroprotective effects [12]. Evodia's primary active components are alkaloids, bitter principles, and volatile oils, exhibiting cardiotonic and vasodilatory effects, anti-thrombotic properties, analgesia, anti-inflammation, antiemesis, anti-ulcer activity, bidirectional regulation of intestinal motility, anti-tumor effects, and neuroprotection [13]. Zuo Jin Wan embodies the classic “pungent to open, bitter to descend” formula. When combined, Evodia's pungent-warm nature moderates Coptis's extreme bitterness and coldness, reducing its gastrointestinal irritation. Coptis provides antibacterial, anti-inflammatory, and gastric acid-suppressing effects, while Evodia alleviates vomiting, relieves pain, and regulates intestinal motility. Their synergistic action effectively treats vomiting, acid reflux, and gastritis caused by stomach heat. This combination also enhances the bioavailability of key components like berberine and evodia alkaloids, thereby boosting overall therapeutic efficacy. Atractylodes macrocephala regulates gastrointestinal motility and protects the gastric mucosa. Its polysaccharides promote mucosal repair, while volatile oils stimulate peristalsis [14]. Poria cocos exhibits anti-inflammatory properties, safeguards the gastric lining, and aids digestion [15]. Together, these herbs address appetite loss, fatigue, and weakened immunity stemming from spleen deficiency. Citrus peel possesses anti-inflammatory effects and enhances gastrointestinal motility [16]. Dandelion exhibits anti-inflammatory effects, inhibits gastric acid secretion, and protects the gastrointestinal tract. Its pharmacological actions result from the synergistic effects of multiple constituents, primarily including terpenoids, polysaccharides, flavonoids, phenolic acids, phytosterols, vitamins, and minerals [17]. Trifoliate orange promotes gastrointestinal motility [18]. Zhebei Motherwort exhibits anti-inflammatory and analgesic effects [19]. Bletilla root reduces swelling and promotes tissue regeneration [20], while Panax notoginseng possesses analgesic and anti-inflammatory properties [21]. Combined, these herbs accelerate wound healing and tissue repair. The film formed by Bletilla root gel not only stops bleeding but also protects the wound surface, minimizing external irritation and infection risks. This creates an optimal microenvironment for tissue repair, thereby hastening wound closure. Notoginsenosides exhibit anti-inflammatory and antioxidant properties, mitigating tissue damage from local inflammatory responses. Simultaneously, they promote angiogenesis and improve local

blood circulation, delivering nutrients and oxygen to the wound site to accelerate cell proliferation and tissue regeneration. Together, they create a "protection + repair" environment. Bletilla acts like a "band-aid" providing physical protection to the wound surface, while Panax notoginseng functions like a "repair agent" promoting growth at the cellular level, significantly accelerating processes such as ulcer healing, surgical incision healing, and bone fracture healing. The combination of Bupleurum and Scutellaria exhibits anti-inflammatory, hepatoprotective, cholagogue, antipyretic, antiviral, antitumor, and immunomodulatory effects. Their active components—baicalin and baicalein—interact through multiple targets and pathways to produce synergistic effects, particularly in regulating inflammatory immune responses. Bupleurum excels at regulating immune cell function, while Scutellaria excels at directly inhibiting inflammatory mediators. Their synergy achieves more comprehensive and effective control of inflammatory responses. Sepia can inhibit gastric acid secretion and protect the gastric mucosa [22]. These components synergistically exert therapeutic effects through multiple targets and pathways, thereby achieving significant results in improving clinical symptoms and promoting endoscopic mucosal repair.

The study findings indicate that after treatment with Zuojin Yifan Granules, clinical symptom scores decreased, clinical symptoms were alleviated, with an efficacy rate of 83.3% and an endoscopic efficacy rate of 86.1%. This demonstrates that Zuojin Yifan Granules comprehensively addresses multiple therapeutic aspects including clearing heat and soothing the liver, strengthening the spleen and regulating qi, harmonizing the stomach and reducing counterflow, and repairing damage. This approach aligns more closely with the TCM theories of "holistic perspective" and "syndrome differentiation and treatment," thereby offering superior therapeutic advantages. This study has certain limitations, such as a relatively small sample size and limited observation period, which prevented in-depth exploration of the long-term efficacy and specific mechanisms of Zuojin Yifan Granules. Future research should expand the sample size, extend the observation period, and conduct further basic studies on the drug's mechanisms of action to provide more robust evidence for the widespread clinical application of Zuojin Yifan Granules.

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References

[1] Chinese Association of Integrative Medicine, Digestive Diseases Committee. Expert Consensus on Integrated Traditional and Western Medicine Diagnosis and Treatment of Gastroesophageal Reflux Disease (2025)[J]. Chinese Journal of Integrative Medicine in Gastroenterology, 2025, 33(3):217.
[2] OKAMOTO T. Clinical and endoscopic characteristics of acute esophageal necrosis and severe reflux esophagitis [J]. Medicine (Baltimore), 2021, 100(44): 27672.
[3] Gao Huixia. Clinical Study on Shugan He Wei Tang Combined with Rabeprazole for Liver-Stomach Disharmony Type Reflux Esophagitis [J]. Chinese Journal of Traditional Chinese Medicine and Pharmacy, 2024, 42(1):105.
[4] Xue Boyu, Wu Wei. Chinese Internal Medicine [M]. Beijing: People's Medical Publishing House, 2016.
[5] Freedberg D E, Kim L S, Yang Y X. The risks and benefits of long-term use of proton pump inhibitors: expert review and best practice advice from the American Gastroenterological Association[J]. Gastroenterology, 2017, 152(4):706-715.
[6] Huang YQ. Effects of Qingyu Hejiang Decoction on LPS/TLR4/NF-κB Pathway and Esophageal Mucosal Barrier in Rats with Reflux Esophagitis Model [J]. Journal of Traditional Chinese Medicine, 2022, 63(22): 2170-2178.
[7] Meng Zihui. Effects of Liver-Soothing, Gallbladder-Draining, and Stomach-Harmonizing Formula on IL-8 and VIPm RNA Expression in Rats with Reflux Esophagitis [J]. Journal of Chinese Medicine, 2022, 40(9): 120-123.
[8] Gao Wei. Clinical Efficacy of Modified Xuanfu Dazhe Decoction Combined with Acupoint Implantation in Patients with Reflux Esophagitis Due to Liver-Stomach Disharmony Syndrome [J]. Chinese Patent Medicine, 2021, 43(11): 3255-3257.
[9] Li Ji, Lian Jianwei. Formulary Science [M]. 10th ed. Beijing: China Traditional Chinese Medicine Press, 2016.
[10] Wang Lina. Clinical Study on the Treatment of Reflux Esophagitis (Liver-Stomach Heat Stagnation Pattern) with Modified Chaihu Shugan Powder Combined with Zuojin Pill [J]. Inner Mongolia Journal of Traditional Chinese Medicine, 2025, 44(6): 55-56.
[11] Shangguan Ding. Mechanism of action of Chaihu Shugan San combined with Zuojin Wan in treating liver-stomach heat syndrome in RE rats based on SCF/c-Kit signaling pathway [J]. Chinese Journal of Geriatrics, 2024, 44(24):6089-6093.
[12] Chen Zhongxin. Advances in Research on the Chemical Constituents and Pharmacological Effects of Coptis chinensis [J]. Harbin Medicine, 2025, 45(1):131-135.

[13] Liu Lili. Advances in Modern Pharmacological Effects, Dosage Form Design, and Clinical External Application Research of Evodia [J]. Journal of Chinese Medicine, 2025, 43(6): 52-60.
[14] Lu Jingfeng, Gu Qianxi, Yang Chen, et al. Advances in Research on the Pharmacological Effects and Mechanisms of Active Components and Effective Ingredients in Atractylodes Macrocephala [J]. Research on Special Products. 2025.082.
[15] Wang Jiarui, Zhang Tian, Lan Xin, et al. Advances in Research on Chemical Constituents, Pharmacological Activities, and Food-Medicine Dual-Use Applications of Poria cocos [J]. Chinese Patent Medicine. 20250417.1731.004.
[16] Gong Yuanxiang, Yan Xin, Zeng Yijia, et al. Research Progress on Chemical Constituents and Pharmacological Activities of Chenpi [J]. Guangdong Chemical Industry, 2024, 51(20): 96-98.
[17] Zhang Yiqing. Prediction Analysis of Chemical Constituents, Pharmacological Effects, and Quality Markers of Dandelion [J]. Journal of Liaoning University of Traditional Chinese Medicine. 2025, 27(2): 59-67.
[18] Jiang Baorui. Advances in Pharmacological Research on Trifoliate Orange [J]. Journal of Yunnan Traditional Chinese Medicine and Chinese Medicine, 2022, 43(6):70-75.
[19] Chen Yutong. Research Progress on Chemical Constituents and Pharmacological Effects of Zhebeimu and Its Predictive Analysis of Quality Markers [J]. Chinese Medicine Information, 2024, 41(6): 60-75.
[20] Mu Kailang. Quality Marker Research of Bletilla Striata Preparations Based on Fingerprint Spectra-Chemometric Analysis-Network Pharmacology [J]. Chinese Herbal Drugs and Clinical Pharmacology, 2023, 34(3): 404-413.
[21] Qin Ling, Hong Liangshuang. Advances in Pharmacological Effects and Clinical Applications of Panax Notoginseng [J]. Zhuang-Yao Medicine Research, 2023,(02):337-340.
[22] Zhong Gansheng. Pharmacology of Traditional Chinese Medicine [M]. 10th ed. Beijing: China Traditional Chinese Medicine Press, 2016.

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