

Study on Evidence and Methods of Traditional Chinese Medicine Nursing for Patients with Diabetic Gastroparesis

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Abstract: Diabetic Gastroparesis (DGP) is one of the common chronic complications of diabetes mellitus, with main clinical manifestations such as nausea, vomiting, postprandial fullness, and delayed gastric emptying. It seriously affects patients' quality of life and nutritional status. This paper systematically sorts out the application evidence of Traditional Chinese Medicine (TCM) nursing in DGP, verifies its effectiveness from three aspects: evidence from ancient literature, modern clinical studies, and results of Meta-analyses. It also elaborates on specific nursing methods including Syndrome Differentiation-Based Nursing, characteristic technical nursing, and health guidance, analyzes the existing problems in current research, and puts forward future development directions, so as to provide a reference for the clinical promotion and standardization of TCM nursing for DGP.

Keywords: Diabetic gastroparesis; Traditional Chinese medicine nursing; Syndrome differentiation-based nursing; Acupoint intervention; Evidence research

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1. Introduction

Diabetic gastroparesis (DGP) is a metabolic disease characterized by gastric emptying disorder, which is caused by gastrointestinal smooth muscle dysfunction and autonomic neuropathy due to long-term hyperglycemia. Epidemiological surveys show that the incidence rate of DGP among diabetic patients is as high as 20% to 50%, of which 20% to 30% of patients have clinical symptoms such as weight loss, nausea and vomiting, early satiety, and postprandial abdominal distension^[1]. Long-term delayed gastric emptying not only leads to impaired nutrient absorption in patients, but also may cause blood glucose fluctuations, increase the risk of hypoglycemia, and even form a vicious cycle of "hyperglycemia–delayed gastric emptying–blood glucose fluctuations", which seriously affects patients' health.

Modern medicine mainly adopts "blood glucose control + symptomatic support" as the core nursing methods, such as guiding patients to use prokinetic drugs like domperidone and developing the dietary habit of small and

frequent meals. Although this nursing method can help patients control the disease and improve symptoms to a certain extent, long-term medication is likely to cause drowsiness and diarrhea in patients, and some patients may develop drug resistance. In view of the clinical characteristics and treatment status of diabetic gastroparesis, traditional Chinese medicine (TCM) has proposed new nursing measures based on the theories of “syndrome differentiation-based nursing” and “holistic concept”^[2]. In TCM, DGP is classified into the categories of “Weihuan” (gastric hypotonia), “Outu” (vomiting), and “Piman” (abdominal distension and fullness).

TCM adopts the strategies of nourishing Yin and promoting fluid production, soothing the liver and regulating Qi, and regulating the spleen and stomach, and implements multi-dimensional intervention measures including emotional nursing, acupoint nursing, and dietary nursing to improve patients’ symptoms. This not only effectively reduces drug side effects, but also improves patients’ long-term compliance. In recent years, with the development and application of the concept of evidence-based medicine, the evidence for the application of TCM nursing in DGP has been continuously accumulated, providing more new schemes for the nursing of patients with diabetic gastroparesis. However, there are still some deficiencies in relevant research work, and systematic sorting is lacking. This article aims to integrate existing evidence, clarify the effectiveness and specific methods of TCM nursing, and further provide a scientific basis for clinical practice^[3].

2. TCM understanding of diabetic gastroparesis (DGP)

2.1. Etiology and pathogenesis

Traditional Chinese Medicine (TCM) holds that the onset of Diabetic Gastroparesis (DGP) is associated with the pathological characteristics of diabetes mellitus, namely “when the disease progresses to an advanced stage, it will affect the kidney” and “a prolonged illness invades the collaterals”, and its core pathogenesis is summarized as “deficiency in the root and excess in the branch”. Among them, “deficiency in the root” refers to the long course of diabetes. Yin deficiency is the fundamental cause, and prolonged impairment of Yin consumes Qi, leading to Qi deficiency of the spleen and stomach; alternatively, Yin deficiency may affect the kidney, resulting in insufficient kidney Yang, which fails to warm the spleen Yang, further causing the spleen to lose its function of transporting and transforming, the stomach to lose its function of harmonizing and descending, and weakness in gastric emptying. “Excess in the branch” means that in patients, Qi deficiency leads to blood stasis, Yin deficiency leads to dryness-heat, and dryness-heat scorches body fluids to form phlegm; phlegm and blood stasis then bind together, blocking the stomach collaterals and further impairing the stomach’s function of unobstructed descent. In addition, patients with diabetes often experience negative emotions such as depression and anxiety due to factors like poor blood glucose control and long disease duration, which subsequently cause liver Qi stagnation; the stagnated liver Qi then rebelliously attacks the stomach, disrupting the stomach’s function of harmonizing and descending and eventually forming the “liver stagnation and spleen deficiency” syndrome type^[4]. Overall, the pathogenesis of DGP lies in “dysfunction of the spleen and stomach”, with its primary location in the stomach and also associations with the kidney, liver, and spleen; it involves deficiencies of Qi, Yin, and Yang, accompanied by excess pathogenic factors such as phlegm, blood stasis, heat, and stagnation.

2.2. Syndrome differentiation and classification

Based on the Guidelines for the Diagnosis and Treatment of Common Diseases in TCM Internal Medicine and clinical practice, the common syndrome types of DGP are as follows^[5].

2.2.1. Spleen-stomach deficiency type

Its main manifestations include obvious abdominal distension after meals, loose stools, fatigue and lassitude, poor appetite with reduced food intake; accompanied by a pale tongue with white coating and a thready-weak pulse.

2.2.2. Liver-stomach disharmony type

Its main manifestations include frequent belching, abdominal distension with hypochondriac pain, emotional depression or irritability, nausea; accompanied by a pale-red tongue with thin white coating and a wiry pulse.

2.2.3. Stomach Yin deficiency type

Its main manifestations include abdominal distension with burning pain in the gastric region, dry stools, hunger without desire to eat, dry mouth and throat; accompanied by a red tongue with scanty fluid, scanty coating and a thready-rapid pulse^[6].

2.2.4. Phlegm-dampness obstruction type

Its main manifestations include abdominal distension with a feeling of fullness, thick and greasy tongue coating, general heaviness, nausea and vomiting of phlegm-saliva; accompanied by a pale tongue with white greasy coating and a slippery pulse.

2.2.5. Spleen-kidney Yang deficiency type

Its main manifestations include abdominal distension with fear of cold, loose stools, soreness and weakness of the waist and knees, especially after eating; accompanied by a pale and enlarged tongue with white slippery coating and a deep-slow-weak pulse.

3. Evidence review of TCM nursing for diabetic gastroparesis (DGP)

3.1. Basis from ancient TCM literature

The emphasis of TCM nursing on “the downward flow and dredging function of the stomach” can be traced back to classic TCM works.

(1) Huangdi Neijing (Inner Canon of the Yellow Emperor)

Suwen (Plain Questions) puts forward the concept of “having regular eating and drinking habits and maintaining a regular daily routine”, and explores methods to protect the functions of the spleen and stomach from the perspective of diet, for example “the five grains are for nourishment, and the five fruits are for assistance”.

(2) Jinkui Yaolue (Synopsis of the Golden Chamber)

Treatise on the Pulse, Symptoms and Treatments of Vomiting, Hiccups and Diarrhea emphasizes that “for cases of vomiting with borborygmus (intestinal gurgling) and stuffiness in the epigastrium (upper abdomen), Banxia Xiexin Decoction (Pinellia Heart-Draining Decoction) is the primary treatment”. It applies drugs with the effects of warming the middle energizer and resolving phlegm, such as dried ginger and pinellia, providing ideas for the drug compatibility of nursing measures like TCM enema and acupoint application.

(3) Jingyue Quanshu (Complete Works of Jingyue)

Pi Man (Abdominal Distension) holds that “most cases of abdominal distension are caused by weakness of the spleen and stomach, insufficient transportation and transformation, and dysfunction of the body’s regulatory mechanism”, clearly pointing out that the core pathogenesis lies in the weakness of the spleen and stomach.

The ideas in classic TCM works, such as “emotional guidance”, “acupoint regulation” and “syndrome differentiation-based diet therapy”, provide a theoretical basis and practical guidance for the application of TCM nursing in DGP.

3.2. Evidence from modern clinical studies

Randomly selected samples were used in controlled trials, and the results showed that the intervention effect of TCM nursing for DGP was significantly better than that of conventional nursing.

3.2.1. Acupoint application

Eighty DGP patients were randomly selected and divided into an observation group and a control group. The observation group received “acupoint application + conventional nursing”, while the control group only received conventional nursing. Comparative analysis revealed that the scores of postprandial nausea, vomiting, and abdominal distension in the observation group were significantly lower than those in the control group; additionally, the gastric emptying time of the observation group was shortened by 28.6% compared with the control group.

3.2.2. Moxibustion nursing

Sixty DGP patients of the Spleen-Stomach Weakness Type were randomly selected and given moxibustion nursing. After 8 consecutive weeks of intervention, observations on the patients’ treatment outcomes showed that their serum motilin levels and the percentage of normal gastric electrical rhythm were significantly increased, with no obvious side effects observed.

3.2.3. Auricular point pressing

Ninety DGP patients were randomly selected and divided into three groups: an observation group treated with auricular point pressing, a western medicine control group, and a blank control group. After 4 consecutive weeks, it was found that the effective rate of symptom improvement in the observation group was comparable to that in the western medicine control group. However, the compliance of the observation group was significantly higher than that of the western medicine control group, and no side effects such as diarrhea or drowsiness occurred in the observation group.

3.3. Evidence from meta-analysis

A Meta-analysis published in Chinese Journal of Emergency Traditional Chinese Medicine in 2023 included 15 Randomized Controlled Trial (RCT) studies involving a total of 1286 patients and conducted a systematic evaluation on the application effect of TCM nursing for DGP. The results showed that.

TCM nursing (including emotional guidance, dietary nursing, and acupoint intervention) can effectively reduce the symptom scores of DGP patients, shorten their gastric emptying time, and improve their quality-of-life scores; furthermore, the incidence of adverse events was significantly lower than that in the western medicine

nursing group. Based on the results of the Meta-analysis, it was concluded that the efficacy of TCM nursing for DGP was supported by moderate to high-quality evidence and that it has higher safety.

4. Specific methods of TCM Nursing for diabetic gastroparesis

4.1. Syndrome differentiation-based nursing: Personalized nursing according to syndrome types

4.1.1. Spleen-stomach deficiency type

For patients of this type, dietary nursing measures can be adopted to achieve the goal of “strengthening the spleen and nourishing the stomach, replenishing Qi and harmonizing the middle energizer”. For example, guide patients to consume more easily digestible foods such as pumpkin, lotus seeds, Chinese yam, and millet porridge, avoid cold, raw, and greasy foods, and add Huangqi (*Astragalus membranaceus*) and Chinese Yam Porridge according to the patients’ actual conditions ^[7,8].

For patients of this type, acupoint intervention can be conducted by selecting acupoints such as Zhongwan (CV12), Zusanli (ST36), and Pishu (BL20), including moxibustion, acupoint massage and more ^[9,10].

Patients with spleen-stomach deficiency are prone to anxiety due to weight loss, poor appetite, and other reasons. Therefore, emotional counseling should be emphasized in nursing work. For instance, provide patients with verbal encouragement and guide them to listen to soothing music, so as to prevent the aggravation of symptoms caused by emotional fluctuations.

4.1.2. Liver-stomach disharmony type

The dietary nursing for patients with liver-stomach disharmony mainly focuses on “soothing the liver and regulating Qi, harmonizing the stomach and descending adverse Qi”. Patients was guided to properly consume more Qi-regulating foods such as fingered citron, dried tangerine peel, and white radish, and avoid spicy and overly sour foods.

In terms of acupoint intervention, acupoints such as Taichong (LR3), Neiguan (PC6), and Qimen (LR14) can be selected for massage.

To help patients of this type alleviate depression and anxiety, the “method of diverting emotions and changing temperament” can be adopted. For example, encourage patients to participate in painting and calligraphy activities, and guide them to practice deep breathing exercises ^[11].

4.1.3. Stomach-Yin deficiency type

The dietary nursing for patients with stomach-Yin deficiency is mainly aimed at “nourishing Yin and invigorating the stomach, moistening dryness and promoting the production of body fluid”. Foods such as *Ophiopogon japonicus*, white fungus, pear, and lily bulb are recommended; patients should avoid overly hot and spicy foods to prevent consumption of stomach Yin ^[12].

In TCM nursing, acupoints such as Sanyinjiao (SP6), Taixi (KI3), and Weishu (BL21) can be selected for massage to nourish Yin and tonify the kidney, nourish the stomach and promote the production of body fluid. If patients have obvious dry mouth symptoms, acupoint application can be used as an auxiliary treatment.

4.2. Characteristic nursing techniques: Safe and effective non-pharmacological interventions

4.2.1. Acupoint application

Select acupoints such as Zhongwan (CV12), Zusanli (ST36), and Neiguan (PC6) for application; adjust the drug compatibility according to the patient's syndrome type. Grind the drugs into powder, mix them with honey or petroleum jelly into a paste, take an amount the size of a soybean to apply on the acupoints, and fix it with adhesive tape. Each application lasts for 6 to 8 hours to avoid areas with broken skin, once a day, and 10 applications constitute one course of treatment. After application, observe the skin reaction: if redness, swelling, or itching occurs, the application time can be shortened or the treatment can be suspended^[13–15].

4.2.2. Retention enema with traditional Chinese medicine

It is suitable for DGP (Diabetic Gastroparesis) patients with obvious dry stool and abdominal distension, aiming to “clearing the fu-organs and descending Qi, moistening the intestines and relieving constipation”.

4.2.3. Tuina massage

Instruct the patient to take a supine position, then use the palm to massage the abdomen clockwise for 10 to 15 minutes each time, twice a day, to promote gastrointestinal peristalsis. Ask the patient to take a prone position, then massage acupoints such as Pishu (BL20), Weishu (BL21), and Shenshu (BL23) respectively, 3 to 5 minutes per acupoint, three times a week, so as to regulate the functions of Zang-fu organs.

5. Effect evaluation and existing problems of TCM nursing

5.1. Effect evaluation indicators

5.1.1. Subjective symptom evaluation

The Diabetic Gastroparesis Symptom Scoring Scale is adopted, with scoring based on 5 dimensions including abdominal distension, early satiety, nausea, vomiting, and abdominal pain.

5.1.2. Objective indicator evaluation

Gastric emptying time and electrogastrogram (EGG).

5.1.3. Quality of life evaluation

The SF-36 scale is used, with scoring from 4 dimensions: role-emotional, social functioning, bodily pain, and physical functioning.

5.2. Existing problems

5.2.1. Insufficient evidence quality

Most existing clinical studies are single-center, small-sample studies; some studies do not adopt the blinding method, leading to selection bias. The number of studies included in Meta-analyses is limited, and there is a lack of long-term (≥ 1 year) follow-up data, making it difficult to verify the long-term efficacy of TCM nursing.

5.2.2. Lack of standardization in nursing methods

There are no unified standards for the application duration and drug dosage of acupoint application, as well as the

duration and temperature of moxibustion. The intervention protocols used in different studies vary greatly, making these protocols difficult to promote.

5.2.3. Variations in patient compliance

Some patients discontinue nursing due to discomfort from traditional Chinese medicine (TCM) enemas or skin allergies caused by acupoint application. Elderly patients have a low acceptance level of exercise guidance and acupoint massage, which affects nursing effectiveness.

6. Outlook

6.1. Conducting high-quality research

In the future, it is necessary to design large-sample, multi-center randomized double-blind controlled trials, and improve the evidence level of TCM nursing by integrating objective indicators and long-term follow-up.

6.2. Formulating standardized protocols

Based on syndrome differentiation and typing, the Standardized Process for TCM Nursing of Diabetic Gastroparesis should be developed to clarify the nursing technical parameters for different syndrome types, thereby ensuring the consistency of nursing effects.

6.3. Integrated TCM and western medicine nursing

Explore the combined nursing protocol of “TCM nursing + Western medicine” to further enhance therapeutic effects, while effectively reducing the dosage of Western medicine and lowering drug side effects.

7. Conclusion

With “syndrome differentiation-based nursing” as its core, Traditional Chinese Medicine (TCM) adopts a variety of approaches, including emotional counseling, acupoint intervention, and dietary nursing, to provide care for patients with diabetic gastroparesis (DGP). This nursing model can significantly alleviate patients’ symptoms, promote gastric emptying, and improve their quality of life (QOL). Additionally, it features higher patient compliance and safety. Existing TCM literature, clinical studies, and Meta-analyses have provided reliable evidence for the application of TCM nursing in DGP management. However, challenges remain, such as the lack of standardization and insufficient quality of evidence. In the future, efforts should be strengthened in this field from the perspectives of high-quality research, formulation of standardized protocols, and integrated TCM-Western medicine nursing. By doing so, more efficient and scientific nursing services can be provided for DGP patients, ultimately improving their long-term prognosis.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Wu R, Chen J, Qi J, et al., 2024, Application Effect of Integrated Traditional Chinese and Western Medicine Nursing Based on the 5A Nursing Model in a Patient with Type 2 Diabetic Gastroparesis. *Proceedings of the 6th Shanghai International Nursing Conference (Volume II)*. Longhua Hospital Affiliated to Shanghai University of Traditional Chinese Medicine: 355–356.
- [2] Zhong J, 2024, Clinical Efficacy Observation of Jianpi Xiaopi Pill in the Treatment of Diabetic Gastroparesis with Spleen-Stomach Deficiency Syndrome, thesis, Hunan University of Chinese Medicine.
- [3] Zhou Y, 2024, Clinical Study on Xuanfu Daizhe Decoction Combined with Erchen Decoction in the Treatment of Type 2 Diabetic Gastroparesis, thesis, Zhejiang University of Chinese Medicine.
- [4] Zhang H, 2024, Effect of Extract from Silkworm Feces (Wancansha) on Intestinal Flora and Interstitial Cells of Cajal in Rats with Diabetic Gastroparesis, thesis, Beijing University of Chinese Medicine.
- [5] Su J, Li J, Ao Y, et al., 2025, Network Meta-Analysis of 5 Classic Traditional Chinese Medicine Prescriptions for Diabetic Gastroparesis Based on the Theory of “Ascent and Descent of Spleen-Stomach Qi Movement”. *Pharmacology and Clinics of Chinese Materia Medica*, 41(02): 71–79.
- [6] Li L, 2024, Clinical Efficacy Observation of Bawei Chaishao Mixture Combined with Mosapride in the Treatment of Diabetic Gastroparesis with Liver-Stomach Disharmony Syndrome, thesis, Gansu University of Chinese Medicine.
- [7] Luo H, Huang G, Zhong C, 2024, Study on Nursing Cooperation and Effect of Modified Xuanfu Daizhe Decoction in the Treatment of Type 2 Diabetic Gastroparesis with Spleen-Stomach Deficiency Syndrome. *Smart Healthcare*, 10(05): 90–93.
- [8] Wang H, Zhuang S, Li M, 2023, Study on the Effect of Evidence-Based Nursing Intervention in Patients with Diabetic Gastroparesis. *Diabetes New World*, 26(17): 126–129.
- [9] Wu Y, Wang L, 2023, Efficacy Observation of Integrated Traditional Chinese and Western Medicine Treatment Combined with Nursing Intervention in Patients with Diabetic Nephropathy Complicated with Gastroparesis, thesis, *Sichuan Journal of Traditional Chinese Medicine*, 41(04): 207–210.
- [10] Zhou H, He Y, 2022, Effect of Integrated Traditional Chinese and Western Medicine Nursing Intervention on Blood Glucose Level and Gastric Emptying Time in Patients with Diabetic Gastroparesis. *Forum of Primary Medical Care*, 26(36): 114–117.
- [11] Li H, 2022, Clinical Efficacy Observation of Warm Acupuncture at Points Related to the Conception Vessel (Ren Meridian) in the Treatment of Diabetic Gastroparesis with Spleen-Stomach Deficiency Syndrome, thesis, Anhui University of Chinese Medicine.
- [12] Hu G, Li J, 2022, Application of Dietary Nursing Based on PDCA Cycle in Patients with Diabetic Gastroparesis. *Journal of Contemporary Clinical Medicine*, 35(01): 94–95.
- [13] Chu T, Ren H, Zhu L, et al., 2020, Effect of Peer Education-Based Transitional Nursing on Psychology and Self-Behavior Management in Patients with Diabetic Gastroparesis. *Psychological Monthly*, 15(16): 12–13 + 15.
- [14] Duan S, 2020, Efficacy Analysis of Integrated Traditional Chinese and Western Medicine Treatment (Warming Yang and Resolving Abdominal Distension) Combined with Nursing for Diabetic Gastroparesis, thesis, Tangshan Third Hospital.
- [15] Zhao S, Wang Y, 2019, Analysis of the Clinical Effect of Comprehensive Nursing Intervention in Patients with Diabetic Gastroparesis. *World Latest Medicine Information*, 19(92): 355 + 358.

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