

Progress in the Study of Chinese and Western Medicine Treatment of Chronic Constipation in the Elderly

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Abstract: *Chronic constipation is a common geriatric syndrome, which not only affects the quality of life, but also induces and aggravates cardiovascular and cerebrovascular diseases and intestinal diseases; it is a common clinical disease and a difficult clinical treatment. About 15% to 20% of the elderly aged 60 and above suffer from chronic constipation. With the further development of population aging, the treatment of chronic constipation in the elderly is becoming more and more important, and this paper provides a review of Western medicine treatment, Chinese medicine treatment and the combination of Chinese and Western medicine in the treatment of chronic constipation in the elderly, in order to provide reference for the future clinical treatment and scientific research.*

Keywords: Chronic constipation in the elderly, Chinese medicine treatment, Western medicine treatment, Combined Chinese and Western medicine treatment.

1. Introduction

Chronic constipation (chronic constipation) is a common syndrome in the elderly [1] [2] divided into primary and secondary, mainly manifested as straining to defecate, reduced stool frequency, difficult defecation, and is currently diagnosed mainly by the Rome IV (Rome IV) criteria and the patient's chief complaint (self-reported), with the symptoms present for at least 6 months and at least 3 months of symptoms. Its prevalence in the elderly over 60 years old is as high as 15% to 20% [3] Long-term bed-ridden elderly even reaches 80%, which seriously affects the patient's quality of life, and may also lead to a series of serious complications, such as hemorrhoids, fissures, and even increase the risk of cardiovascular and cerebrovascular diseases [4]. Research on constipation in the elderly can help to gain an in-depth understanding of its pathogenesis and provide a basis for the development of more effective preventive and therapeutic strategies. This study aims to integrate the research results of Chinese and Western medicine to provide a more comprehensive and effective protocol for the treatment of chronic constipation in the elderly. By combing and analysing the respective research advances in Chinese and Western medicine, we explore the possibilities and advantages of combining Chinese and Western medicine in the treatment of chronic constipation, with a view to contributing positively to the improvement of the health and quality of life of the elderly.

2. Classification of Chronic Constipation in the Elderly

Chronic constipation in the elderly is classified into primary and secondary. Primary refers to constipation caused by changes in intestinal motility and intestinal secretory function as well as intestinal flora, while secondary refers to constipation caused by organic or metabolic diseases or drugs. According to its characteristics, chronic constipation in the elderly can be classified as follows: (1) functional constipation: due to the weakening of intestinal motility

caused by aging, the reduction of mucus and digestive juices secreted by the intestinal tract, and the decrease in the number of beneficial flora in the intestinal tract and increase in the number of harmful flora that may be caused by aging, all of which may negatively affect the functioning of the intestinal tract. (2) Organic constipation: triggered by organic diseases of the intestinal tract, neurological diseases, or systemic diseases, etc.; (3) Drug-related constipation: caused or aggravated by long-term use of opioid analgesics, bismuth, antidepressants, antihistamines, antacids, diuretics, antihypertensives, and other medications in elderly people [5].

3. Status of Western Medical Treatment

3.1 Dietary Therapy

Dietary therapy is an effective non-pharmacological treatment for constipation in the elderly. Elderly people prefer to eat low-fibre and fine foods because of decreased chewing function due to oral problems, and they are prone to constipation because of decreased digestive function, simple diet and less frequent intake of food. Therefore, dietary adjustment is an important part of the treatment of constipation in the elderly. Increase the intake of dietary fibre, such as wholemeal bread, vegetables and fruits, etc., which helps to increase the volume of faeces and promote intestinal peristalsis. Ensuring adequate water intake can keep the faeces soft and easy to discharge; at the same time, correcting bowel habits and developing the habit of regular defecation; increasing the time and intensity of exercise can significantly improve the severity of constipation symptoms [6].

3.2 Psychotherapy and Psychotropic Medication

Patients are usually accompanied by anxiety, depression and other psychological disorders, according to Shao Huilong [7] and other research shows that the constipation group anxiety self-assessment scale (SAS) scores were significantly higher than the normal control group, anxiety and other psychological factors play a role in the development of

constipation. Combined treatment with haloperidol melittin or personalised music therapy can effectively improve symptoms and reduce anxiety and depression scores, which is better than drug treatment alone, and has better efficacy and safety. Also psychological interventions such as counselling and relaxation training are sometimes included in the treatment strategy.

3.3 Conventional Medication

The conventional types of drugs used in the treatment of constipation in the elderly include six categories, including osmotic laxatives, volumetric laxatives, stimulant laxatives, lubricating drugs, gastrointestinal dynamics, and microecological agents, which are reviewed as follows:

(1) Osmotic laxatives mainly include polyethylene glycol and lactulose. Polyethylene glycol softens faeces by increasing the osmotic pressure in the intestines, allowing water to enter the intestines, and is suitable for patients with mild and moderate constipation. Lactulose is a prebiotic, which helps to promote the growth of beneficial flora in the elderly when the harmful flora in the intestinal tract increases and the beneficial flora decreases. Zhu Guoxing et al [8] gave the addition of lactulose on the basis of the control group, and the results showed that the total effective rate of treatment with the addition of lactulose was better than that of the control group. Lactulose is a mild and safe laxative that can generally be taken for a long period of time and can also be used in patients with chronic cardiac and renal insufficiency.

(2) Volumetric laxatives, including methylcellulose, psyllium, wheat bran and calcium polycarbophil, can increase the volume of faeces by absorbing the water in the intestinal canal and then expanding the intestinal volume to stimulate intestinal peristalsis and promote defecation. It is mainly used for mild constipation. In order to avoid mechanical intestinal obstruction, attention should be paid to the appropriate amount of water supplementation in the course of medication.

(3) Stimulant laxatives such as bisacodyl and senna, can form soluble sodium salts with alkaline intestinal fluid in the intestinal tract, so that water and electrolytes diffuse into the intestinal tract, increase the intestinal luminal water and thus increase intestinal peristalsis and improve chronic constipation. Although this type of laxative is fast-acting and effective, it should not be used for a long period of time. Long-term use not only affects the water-electrolyte balance in the intestinal tract, but even causes damage to the intestinal interosseous plexus, leading to colorectal muscle weakness and incontinence of the bowels. Long-term use of anthraquinones may also lead to colonic melanosis [9].

(4) Lubricating drugs such as glycerine, liquid paraffin, etc., mostly inorganic mineral oils, are a class of laxatives that are not absorbed in the intestines, and make the faeces easy to pass by lubricating and softening them. It is suitable for the elderly, the infirm, patients with haemorrhoids or patients after anal surgery. It can be taken orally or made into an enema.

(5) Gastrointestinal power drugs in recent years in the clinical treatment of chronic constipation in the elderly, gradually

become the basis of such diseases [10] mainly including prucalopride, mosapride and linaclotide, of which prucalopride and mosapride are 5-hydroxytryptamine agonists, able to produce non-selective agonism on 5-hydroxytryptamine receptors, can effectively stimulate the interneurons of intestinal muscles and promote the release of acetylcholine, thus improving the gastrointestinal power to achieve the effect of treating chronic constipation [11]. They can effectively stimulate the interneurons of the intestinal muscle and promote the release of acetylcholine, thus improving the gastrointestinal tract dynamics and achieving the effect of treating chronic constipation [11]. The most common drug is mosapride, and Zhao Jun [12] conducted a study in which mosapride was added to the control group, and the therapeutic effect of its combination was significant and the relapse rate was lower. Hu Jian [13] treated two groups of patients with prucalopride and mosapride respectively, and the result was that the total effective rate of treatment in the prucalopride group was 95.00%, which was higher than that of 80.00% in the mosapride group ($P < 0.05$), proving that the effective rate of prucalopride was higher. Linaclotide [14] belongs to the guanylate cyclase C agonist, the prototype and its active metabolite, both of which bind to cyclase C and act on the intestinal epithelial cells to activate cyclase C, thus promoting intestinal peristalsis. Guo Cunguo et al [15] randomly divided 84 cases of elderly patients with chronic constipation into two groups, in the control group based on the addition of linaclotide for bowel preparation before colonoscopy, using the Boston Bowel Preparedness Scale (BBPS) to compare, the observation group of the transverse colon BBPS scores are higher than those of the control group ($P < 0.05$), and the time of the first bowel movement is shorter than that of the control group ($P < 0.05$).

(6) Microecological preparations are mainly Bifidobacterium lactis triplex tablets, which are what we usually call probiotics, and it includes three kinds of live bacteria, namely Bifidobacterium longum, Lactobacillus bulgaricus and Streptococcus thermophilus, which can regulate the microecology in the intestinal tract, improve the symptoms of constipation caused by intestinal flora disorders, and can be used as an adjunctive treatment for chronic constipation in the elderly. Yu Huanyu [16] found that after 4 weeks of treatment with Bifidobacterium bifidum Lactobacillus terrestris tablets in the control group, the constipation-related indexes [disability scale (CRDS), constipation patient's self-assessment questionnaire of symptoms (PAC SYM), Bristol Stool Fecal Characteristics (BSFS) scores] of the observation group were significantly better than those of the control group, which indicated that the combined Bifidobacterium bifidum Lactobacillus terrestris tablets had a more Significant. He Fuqian et al [17] showed that the combination of Bifidobacterium lactis triphala tablets and polyethylene glycol alone could significantly improve the symptoms of constipation, but the difference in their effects was statistically significant ($P < 0.05$). It can be seen from the clinical study that Bifidobacterium lactis triple live bacterial tablets are highly effective as an adjunctive treatment for chronic constipation in the elderly.

During the course of treatment, the doctor will develop a personalised treatment plan based on the patient's specific situation. For example, in the case of older persons with other

chronic diseases, such as cardiovascular diseases, the choice of medication needs to be particularly careful in order to avoid drug interactions and adverse reactions.

3.4 Surgical Treatment

In addition, some elderly patients may have colonic redundancy, severe outlet obstruction or megacolon secondary to long-term chronic constipation. The constipation symptoms of these diseases seriously affect daily life and work, and surgical treatment may be considered after long-term non-surgical treatment is ineffective. However, surgery is usually the relegated option because of its risks and complications. Meanwhile, it is still necessary to maintain a good lifestyle and diet after surgery to reduce the risk of recurrence of constipation.

3.5 Other Therapies

In cases where conventional treatments are ineffective, faecal transplantation may be an effective treatment option for elderly patients with constipation, which involves transplanting intestinal flora from the faeces of a healthy donor into the patient's intestinal tract to re-establish the patient's intestinal micro-ecological balance for the treatment of internal and external intestinal disorders.

Biofeedback therapy also has a place in Western medicine. Through instrumental monitoring and feedback, it helps patients to train their pelvic floor muscles to improve the co-ordination of movements during defecation and increase the efficiency of defecation.

In conclusion, the strategies of Western medicine for treating constipation in the elderly are diversified, taking into account the patient's physical condition, the severity of the disease, and psychological factors in order to achieve the best therapeutic effect. However, it should be noted that the response of patients and changes in their conditions should be closely monitored during the treatment process, and the treatment plan should be adjusted in a timely manner to ensure the safety and effectiveness of the treatment.

4. Current Status of Chinese Medicine Treatment

4.1 Evidence-based Treatment

Chinese medicine treats constipation in the elderly in a variety of ways, and has unique advantages. The identification and treatment is its basic method, but the experience of each family is different, is summarised as follows: Zhuang Meixing [18] that the elderly constipation qi and blood deficiency type should nourish the blood and benefit the qi, more angelica, chuanxiong, cassia seeds, xuan shen, peach kernel, hedgehog and so on; spleen and lung weakness should be declared to pass the stools with astragalus, sang baiqi, almonds, raw rhubarb, atracylodes macrocephala, roasted loquat leaves and hedgerow shells plus subtractions for the treatment. Lan Xiaoho et al [19] summarized the experience of Xu Xinmei in the treatment of this disease and divided it into four types, spleen and stomach qi deficiency type of treatment to strengthen the spleen to help transport, the

formula with the four gentleman soup as the main formula; liver qi stagnation type of treatment to dredge the liver and eliminate depression and strengthen the spleen, the formula with the Chai Shao six gentleman soup with subtractions; spleen deficiency and dampness stagnation type of treatment to transform dampness and diuresis, move qi to pass the stools, the formula with the Huo Park Xia Ling soup with subtractions; blood stasis and blood stasis obstruction type of treatment to move qi, activate blood and pass the blood, the formula with the peach red four substance soup with The formula is Tao Hong Si Wu Tang combined with Si Jun Zi Tang plus Dan Shen, Red Peony, Yu Jin and Curcuma longa. Zhang Jing et al [20] introduced the experience of Professor Cao Jianxiong, divided the elderly constipation into five types of evidence, hot secret treatment to pass the internal organs and drain heat or reconcile the Shaoyang, internal diarrhoea and heat knot, the formula with large Chengqi Tang plus subtractions or large Chaihu Tang plus subtractions; cold secret treatment to warm the Yang dispersal of cold, laxative pain, the formula with rhubarb and epitheloid soup combined with the Wen Spleen Soup plus subtractions; stagnation of gas and food accumulation of the evidence of the treatment of the drainage of heat and attack the accumulation of the prescription Hovenia Conducting stagnation of the powder and the six mill soup plus subtractions; kidney yang deficiency evidence of the treatment of the kidney to warm the essence, Kidney yang deficiency is treated by warming the kidney, benefiting the essence, moistening the bowels and passing stools, which is added and reduced by Jichuan Decoction. Liu Juxiang et al [21] believe that most of the constipation in the elderly "deficiency constipation" category, can be divided into four types of evidence: yin deficiency type treatment to nourish yin, laxative, available mulberry Cistanche hibiscus soup or pine nuts and sesame seed soup; blood deficiency type of treatment to nourish the blood, laxative, available Shouwu Cistanche hibiscus soup or angelica astragali soup; qi deficiency type of treatment to tonify the qi to raise lift and lower the turbid laxative, the available formula to replenish zhong yi qi soup plus reduction; yang deficiency type of treatment to nourish the blood, laxative prescription with the addition and subtraction of hemp zi ren pill. Yang deficiency is treated by warming Yang to moisten the bowels and pass stool, and can be treated with Liao Yang Ma Ren Tang or Liao Yang Cistanches Cream.

4.2 Monotherapy

Chinese medicine is a common means of treatment, in addition to evidence-based treatment, some medical practitioners have also summarised formulas, according to the patient's specific symptoms of different slight additions and subtractions, can also get better results. Qiu Wenda [22] used Jichuan Decoction combined with supplementation of Zhong Yi Qi Tang plus reduction (Cistanchis, Angelica sinensis, Radix Rehmanniae Praeparata, Radix Achyranthis Bidentatae, 15g each, Astragalus Membranaceus, 30g, Radix et Rhizoma Ginseng, 20g, Rhizoma Atractylodis Macrocephala, Citrus Aurantium Citri Reticulatae, 10g, Chai Hu, Sheng Ma, 9g, Roasted Glycyrrhiza Glabra, 6g) to treat 56 cases of chronic constipation in the elderly, with 31 cases cured and 22 showing obvious effects, with an effective rate of 94.64%. Zhu Huanhuan et al [23] treated 50 cases of elderly constipation with Nourishing Lung and Kidney Formula

(XuanShen, Maitong, Radix Rehmanniae Praeparata, Radix Rehmanniae, Rhizoma Pinelliae, Rhizoma Pinelliae, Radix Paeoniae Alba, Cistanchesiae Cistanches, 20g of Atractylodis Macrocephalae, Peach kernel, Hovenia Citri Reticulatae, Licorice, 6g of Radix et Rhizoma Glycyrrhizae, etc.), and treated them with the control group for 8 weeks. 0.05). Xu Zhiwei et al [24] treated 49 cases of constipation in the elderly with Astragalus soup plus reduction (30g of sizzling astragalus, 20g of white honey (punch), 20g of raw dihuang, 15g of peach kernel, 15g of hemp seed kernel, 12g of angelica, 10g of Hovenia citriodora, 10g of cypress seed kernel, 10g of bitter apricot kernel, 10g of chen pericarp) with a total effective rate of 91.83%. Sun Peng's [25] self-proposed laxative formula (Sheng Bai Zhu, Dang Gui, Bai Shao, Di Huang, Cistanche, Xuan Shen, Maidong, Citrus aurantium, Zhi Mu, Scutellaria baicalensis, Gua Puzu), which was his empirical usage for treating constipation in the elderly, achieved good clinical efficacy. Wang Liying et al [26] treated 60 cases of constipation in the elderly with self-proposed Qi Rong Xing Heng Tong (Astragalus membranaceus 30 g, Cistanches 20 g, Angelica sinensis 15 g, Atractylodes macrocephala 15 g, Rhizoma Atractylodis Macrocephala 20 g, Dendrobium officinale 15 g, Peach kernel 10 g, Citrus aurantium dulcis 10 g, Magnolia officinalis 10 g, Phellodendron Bark 10 g, Pericarpium Citri Reticulatae 10 g, Radix et Rhizoma Glycyrrhizae Praeparata 5 g) with an overall efficiency rate of 95.0%, cured in 23 cases, improved in 34 cases and ineffective in 3 cases.

4.3 Acupuncture Treatment

Acupuncture therapy also plays an important role in treating constipation in the elderly. Acupuncture and moxibustion therapy refers to a variety of therapeutic methods including stabbing, moxibustion, plastering, burying threads, etc., and a variety of methods can be used in a comprehensive manner when treating constipation in the elderly, with significant therapeutic effects. Ruan Hong et al [27] believe that the treatment of chronic constipation in the elderly should start from dredging the gastrointestinal and visceral qi and regulating the gastrointestinal function; take the hand acupoints of the large intestine, the small intestine, the triple jiao point, the kidney point, the liver point, and use the adhesive tape to bind the tightened toothpick in the form of a plum blossom for the puncture, and the treatment of constipation in the elderly is 36 cases, and the total effective rate is 94.44% after 15 consecutive days. Wang Feng et al [28] added Tianshu, Shangjiuxu, Xiajiuxu, Shusanli, Qihai acupoints for acupressure and rhubarb navel compresses on the basis of the control group, treating 35 cases of constipation in the elderly, with 34 effective cases and a total effective rate of 97.14%. Wang Lanlan et al [29] added laxative Chinese medicine paste on the basis of intestinal function training, Tianshu (bilaterally), Shenque, Qihai, Guanyuan, 8h per day, for 2 weeks, the total effective rate of treatment reached 95%.

Through acupuncture on specific acupoints, such as Tianshu, Shusanli, Zhigou, etc., it can regulate the flow of qi and blood in the intestines and promote intestinal peristalsis, thus relieving the symptoms of constipation. In addition, moxibustion is also an effective method to enhance the body's yang qi and improve intestinal function through warm stimulation of acupoints, such as Shen Que and Guan Yuan.

Chinese herbal compresses are also a speciality therapy. Chinese medicines with laxative effects are made into compresses and applied to acupoints such as Shen Que and Guan Yuan to exert laxative effects through the penetration of medicines and stimulation of acupoints.

4.4 Tui Na Therapy

Tuina massage is also a common method used by Chinese medicine practitioners to treat constipation in the elderly. Professional massage therapists will carry out clockwise massage in the abdomen to promote intestinal peristalsis, and at the same time will also massage some intestinal-related acupoints, such as the large intestine Yu, spleen Yu, etc., to achieve the purpose of regulating the internal organs, through the internal organs and diarrhoea. Chapter development [30] in the conventional treatment on the basis of the addition of gastrointestinal massage for the treatment of constipation in the elderly 52 cases, the total effective rate of 96.15%, the difference between the two groups is statistically significant ($P < 0.05$).

4.5 Other Traditional Chinese Medicine (TCM)

TCM also focuses on bowel function training to treat constipation in the elderly. Elderly people are advised to defecate regularly, rub the abdomen clockwise and massage the anal sphincter muscle with paraffin oil lubrication; as well as in terms of diet, consume more food rich in dietary fibre, such as vegetables, fruits and coarse grains, in order to increase the volume of faeces and promote intestinal peristalsis. At the same time, according to the dietary theory of Chinese medicine, consuming some foods with laxative effect, such as honey, black sesame, banana, etc., also helps to improve constipation.

In conclusion, Chinese medicine treats constipation in the elderly in a variety of ways, and pays attention to the overall regulation and individual differences. Therefore, in practical application, it is necessary to use a variety of Chinese medicine treatment methods according to the specific conditions of the elderly to improve the therapeutic effect.

5. Combined Chinese and Western Medicine

The combination of Chinese and Western medicine in the treatment of chronic constipation in the elderly has achieved remarkable results in clinical practice. By organically combining the treatment concepts and methods of Chinese medicine and Western medicine, it provides a more comprehensive and effective programme for the treatment of constipation in the elderly. For example, Lou Jinyan [31] treated chronic constipation in the elderly with Astragalus Rong Run Intestinal Oral Liquid combined with Polyethylene Glycol 4000 Bulk, and the total effective rate was 92.31%, while the total effective rate was 74.36% with Astragalus Rong Run Intestinal Oral Liquid alone. Huang Jie et al [32] treated 44 cases of chronic constipation in the elderly with Sanlian live bacterial tablets combined with Si Mu Tang, 39 cases were effective and the total effective rate was 88.6%. Li Qian et al [33] in the conventional drug based on the addition of yi qi nourishing yin method of traditional Chinese medicine combined with probiotics for the treatment of elderly

constipation 40 cases, the total effective rate of 90.0%, the difference between the two groups of total effective rate of treatment is statistically significant ($P < 0.05$).

The combination of Chinese and Western medicines in treating constipation in the elderly has significant complementary advantages. In treating constipation in the elderly, Chinese medicine pays attention to the holistic concept and evidence-based treatment, and improves constipation fundamentally by regulating the balance of yin and yang in the body and the operation of qi and blood. For example, the use of Chinese medicine prescriptions can be flexibly adjusted according to the individual's physique and condition, so as to achieve the effects of moistening the intestines and laxatives, benefiting qi and blood, nourishing yin and moistening dryness, and so on. Meanwhile, external therapies such as acupuncture and tuina of Chinese medicine can also stimulate meridian points and promote bowel movement.

In the research and treatment of constipation, Western medicine focuses on the exploration of pathophysiological mechanisms. Through modern medical testing methods, such as colonoscopy and intestinal dynamics testing, the specific causes of constipation, such as intestinal nerve dysfunction and abnormal intestinal muscle contraction, can be clarified. On this basis, the strategies of Western medicine for treating constipation in the elderly include the use of laxative drugs, intestinal dynamics drugs, and conducting biofeedback therapy.

The complementary advantages of Chinese and Western medical treatments are reflected in a number of aspects. Initially, the toning effect of Chinese medicine can make up for the side effects that may be produced by Western medicine in the course of treatment. For example, the long-term use of certain laxative drugs may lead to intestinal dependence, whereas the conditioning methods of Chinese medicine can help restore the function of the intestinal tract itself. The second consideration is that the clear diagnosis of Western medicine provides a more accurate reference for the identification and treatment of TCM. Through the test results of modern medicine, TCM practitioners can adjust the treatment plan in a more targeted manner. Furthermore, the combination of Chinese and Western medicine can improve the effectiveness and efficiency of treatment. For elderly patients with more complicated constipation, a single treatment may not be effective, while the combination of Chinese and Western medicines can give full play to their respective advantages and provide faster relief of symptoms.

6. Summary

Chronic constipation in the elderly is a common but important health problem. By sorting out the research progress of Chinese and Western medicine in chronic constipation in the elderly, we can see that both Chinese medicine and Western medicine are constantly exploring and innovating to contribute to the solution of this problem. In terms of the combined treatment of Chinese and Western medicine, the regulation and cure of the root cause of the disease in Chinese medicine, combined with the rapid relief of symptoms and targeted treatment in Western medicine, can improve the

treatment effect and reduce adverse reactions. However, until now, there is still no effective cure for chronic constipation in the elderly. We should strive to promote the development of Chinese medicine in the future, and continuously improve the scientificity and reliability of its research, so as to provide more effective solutions for the clinical treatment of this disease.

References

- [1] Soares Nicole C, Ford Alexander C,. Prevalence of, and risk factors for, chronic idiopathic constipation in the community: systematic review and meta-analysis. [J]. *The American journal of gastroenterology*, 2011, 106(9): 1582-1591.
- [2] Gallegos-Orozco Juan F, Foxx-Orenstein Amy E, Sterler Susan M, et al. Chronic constipation in the elderly. [J]. *The American journal of gastroenterology*, 2012, 107(1): 18-25.
- [3] Chu Huikuan, Zhong Likun, Li Hai, et al. Epidemiology Characteristics of Constipation for General Population, Pediatric Population, and Elderly Population in China [J]. *Gastroenterology Research and Practice*, 2014, 2014: 532734.
- [4] YAO Jianfeng, ZHENG Songbai. Interpretation of the expert consensus on the assessment and management of chronic constipation in the elderly [J]. *Chinese Electronic Journal of Geriatrics Research*, 2017, 4(2): 28-31.
- [5] Editorial Committee of Chinese Journal of Geriatrics, Geriatrics Branch, Chinese Medical Association. Expert consensus on the assessment and treatment of chronic constipation in the elderly [J]. *Chinese Journal of Geriatrics*, 2017, 36(4):371-381.
- [6] HE Lan, ZHENG Songbai. Common causes and treatment strategies of refractory constipation in the elderly [J]. *Chinese Journal of Geriatrics Research (Electronic Edition)*, 2019, 0(3):10-14.
- [7] SHAO Huilong, ZHANG Hongming, WANG Qian, et al. Effects of anxiety on autonomic function in elderly patients with chronic constipation [J]. *Chinese Journal of Modern Medicine*, 2007, 17(8):954-955+959.
- [8] Zhu Guoxing. Effect Evaluation of Lactulose Combined with Mosapride in the Treatment of Senile Chronic Constipation [J]. *Systems Medicine*, 2022,7(8):92-95.
- [9] Tack J, Müller-Lissner S, Stanghellini V, et al. Diagnosis and treatment of chronic constipation--a European perspective. [J]. *Neurogastroenterology and motility: the official journal of the European Gastrointestinal Motility Society*, 2011, 23(8):697-710.
- [10] Huang Zhu'e. Observations on the efficacy of 56 cases of constipation caused by pulmonary heart disease in the elderly treated with si mou tang and lactulose [J]. *Yunnan Medicine*, 2018, 39(6):561-563.
- [11] GUO Lingli, LI Hongyan, BIAN Honglei, et al. Clinical observation of prucalopride in the treatment of chronic constipation [J]. *China Pharmacy*, 2018, 29(12): 1693-1696.
- [12] Zhao Jun. Observation on the effect of lactulose combined with mosapride in the treatment of chronic constipation in the elderly [J]. *Chinese Journal of Clinical Rational Drug Use*, 2020, 13(8):96-97.

- [13] HU Jian. Prucalopride and Mosapride in the treatment of chronic coprostasis in elderly [J]. *Journal of Bethune Medical Science*, 2016, 14(4):420-421.
- [14] Freitas Maria Eliza, Alqaraawi Abdullah, Lang Anthony E, et al. Linaclotide and Prucalopride for Management of Constipation in Patients with Parkinsonism. [J]. *Movement disorders clinical practice*, 2018, 5(2): 218-220.
- [15] GUO Cunguo, FU Sihua. Evaluation of the effect of linaclotide combined with compounded polyethylene glycol electrolytes applied to bowel preparation in elderly patients with chronic constipation [J]. *China Medicine Herald*, 2024, 21(14):95-97.
- [16] Yu Huanyu. Observation on the effect of Bifidobacterium lactis triple live bacterial tablets combined with polyethylene glycol 4000 bulk in the treatment of chronic constipation in the elderly [J]. *Zhongguo niankang medicine*, 2019, 31(20):39-40.
- [17] HE Fuqian, LI Xiaoran, HUANG Xiaoli. Clinical study of Bifidobacterium lactis triplex tablets combined with polyethylene glycol 4000 bulk in the treatment of chronic constipation in the elderly [J]. *West China Medicine*, 2017, 32(12):1872-1875.
- [18] Zhuang Meixing. Observation on the efficacy of Chinese medicine discernment in treating senile constipation [J]. *Electronic Journal of Clinical Medicine Literature*, 2018, 5(14):35-36.
- [19] LAN Xiaoho, HUANG Yajing, KWONG Weihong, ZHANG Zhengzheng, WANG Changjun. Introduction of Xu Xinmei's experience in treating constipation in the elderly [J]. *New Chinese Medicine*, 2019, 0(10): 331-333.
- [20] Zhang Jing, Lei Xiaoming, Cao Jianxiong. Professor Cao Jianxiong's experience in treating constipation in the elderly [J]. *China Traditional Chinese Medicine Modern Distance Education*, 2019, 17(7):47-49.
- [21] LIU Juxiang, CHEN Dunhan. Observations on the efficacy of traditional Chinese medicine combined with dietary modification on chronic constipation in the elderly [J]. *Journal of Microcirculation*, 2013, 23(2):63-64+I0002.
- [22] Qiu Wenda. Jichuan decoction combined with tonifying the middle and benefiting qi soup in treating 56 cases of chronic constipation in the elderly [J]. *Chinese Medicine Clinical Research*, 2017, 9(13):119-120.
- [23] ZHU Huanhuan, LU Guoqiang, OU Qiang. Clinical observation of nourishing lung and kidney formula for treating chronic constipation in the elderly [J]. *Clinical Research on Traditional Chinese Medicine*, 2018, 10(31):101-102.
- [24] HU Zhiwei, QIN Fufang. Clinical observation on the treatment of constipation in the elderly with the addition and subtraction of Huangqi Tang [J]. *Journal of Practical Chinese Medicine*, 2022, 38(12):2070-2072.
- [25] SUN Peng. The essentials of treatment of constipation in the elderly [J]. *Journal of Shaanxi University of Traditional Chinese Medicine*, 2024, 47(3):119-123.
- [26] WANG Liying, CHEN Difeng. Observations on the efficacy of Qi Rong Xing Lagging Laxative Soup in the treatment of functional constipation in the elderly [J]. *China Traditional Chinese Medicine Science and Technology*, 2021, 28(5):856-857.
- [27] Ruan Hong, Shen Yanqin. Observations on the efficacy of puncture hand acupoint method plus health education in the treatment of chronic constipation in the elderly [J]. *Chinese Journal of Misdiagnosis*, 2006, 6(6):1070-1071.
- [28] WANG Feng, YANG Fang, MING Shunhua. Clinical observation on the treatment of chronic constipation in the elderly by Chinese medicine comprehensive therapy [J]. *World Composite Medicine*, 2019, 5(10):16-19.
- [29] WANG Lanlan, WU Fengju, PAN Hongwei, et al. Application of traditional Chinese medicine acupoint patch combined with intestinal function training in chronic constipation in the elderly [J]. *Hebei Traditional Chinese Medicine*, 2024, 46(6):1004-1007+1012.
- [30] Zhang Kaifa. Analysis and investigation of the application of gastrointestinal massage health care method in elderly patients with constipation [J]. *Medical Food Therapy and Health*, 2020, 18(16):15-15+17.
- [31] Lou Jinyan. Qi Rong Runchang oral liquid combined with polyethylene glycol 4000 powder in the treatment of elderly patients with chronic constipation [J]. *Chinese Community Doctors*, 2018, 34(8):108-108+110.
- [32] Huang Xian, Zhong Zhixu. Treatment of 44 cases of chronic constipation in the elderly by combining Sifu Tang with Sanlian Live Bacteria Tablet [J]. *Guide of China Medicine*, 2013, 11(18):521-522.
- [33] Li Qian, Liu Meng, Zhu Yangyang, et al. Clinical efficacy of Yiqi and Yin method combined with probiotics in the treatment of chronic constipation in the elderly [J]. *Chinese Journal of Gerontology*, 2023, 43(13):3129-3131.