

Advances in the treatment of post-stroke constipation in Chinese medicine

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Abstract: The study of post-stroke constipation in Chinese medicine has been systematically described and summarized in recent years. Through the study of relevant literature at home and abroad in recent years, we introduced the historical origin, etiology, etiological mechanism and prescriptions of TCM from the aspects of internal treatment, external treatment and other means of treatment, and analyzed and explained various TCM characteristic external treatments such as acupuncture, tui-na, such as acupuncture, tuina, acupuncture point patching, and Chinese medicine enema, and summarizes other treatment methods such as physical stimulation and multi-means combination. The literature shows that timely, reasonable and thorough TCM treatment can relieve patients' symptoms at the root, with good long-term effects and low recurrence rate after drug discontinuation, and reduce the incidence of drug-dependent constipation caused by western drugs, thus improving patients' living standards and quality of life.

Keywords: post-stroke; constipation; Traditional Chinese medicine treatment; research progress

1. Introduction

Stroke is a disease in which blood cannot enter normal brain tissue due to blockage or rupture of cerebral blood vessels, and is characterized by a series of symptoms of neurological deficits, which falls under the scope of "stroke" in traditional medicine; neurological deficits lead to low limb movement or even hemiplegia, resulting in prolonged braking, weakened bowel movement, and The above symptoms fall under the scope of "constipation and difficulty in defecation" in traditional Chinese medicine. In recent years, the incidence of stroke has been increasing year by year due to increased work and life stress and disruption of work and rest in the society, and the first incidence of stroke has increased by 8.30% per year in the middle-aged and elderly population, and the probability of post-stroke complications of constipation has also increased significantly, reaching 45.00% ^[1], see Figure 1. At the same time, the constipation of stroke patients is too hard to defecate and the intra-abdominal pressure rises, resulting in enhanced myocardial contraction and increased blood pressure, which may lead to a second stroke, see Figure 2.

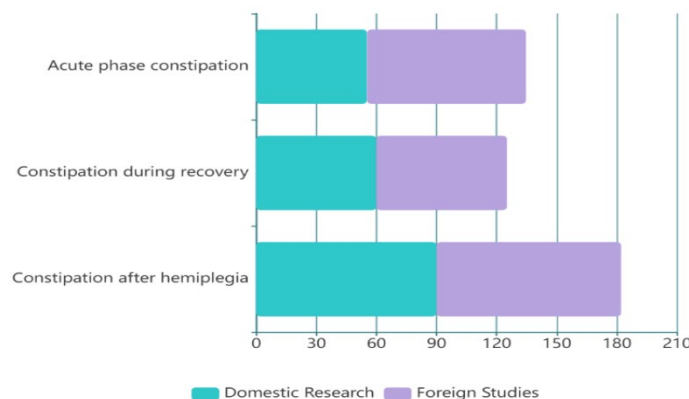


Figure 1: Incidence of post-stroke constipation in different periods in China and abroad

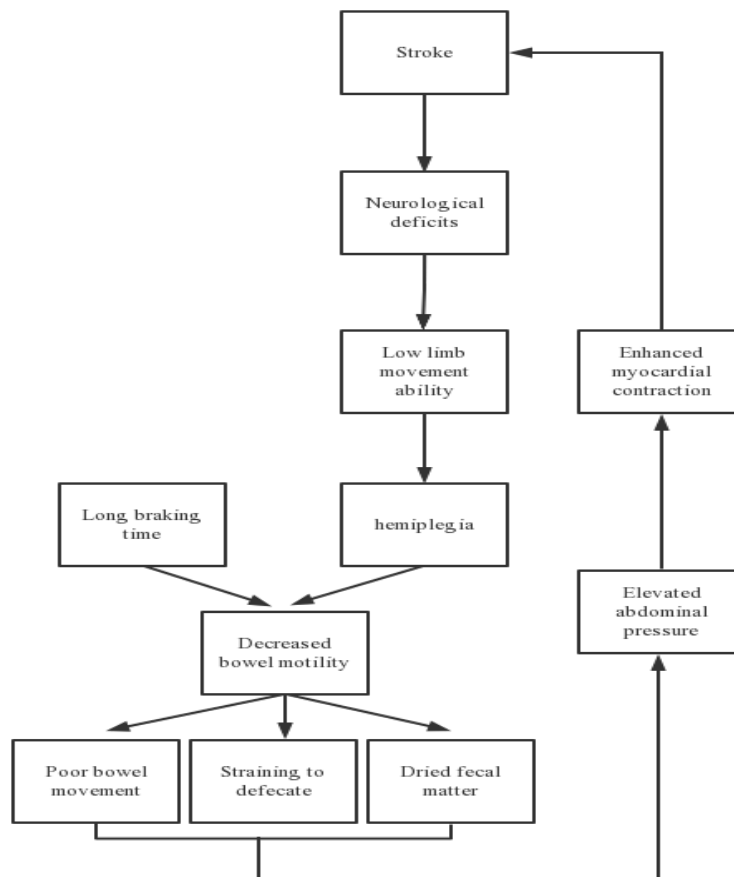


Figure 2: Mechanism of post-stroke constipation

Most of the researchers in China and abroad agree that reduced activity, weakened pelvic floor muscles and altered dietary structure are important causes of post-stroke constipation [2]; some scholars suggest that autonomic nervous system dysfunction, hypersecretion of intestinal secretion and the neurological pathways of the "brain-gut axis" may cause post-stroke constipation [1]; a few researchers currently believe that altered intestinal microbiota is an important part of the cause [3], see Table 1. Therefore, Western medical treatment is mostly used in combination with gastrointestinal motivational drugs and intestinal lubricants for symptomatic treatment, with a high relapse rate after discontinuation of medication, which is likely to produce drug-dependent constipation in the long run, and the long-term effect is not significant. According to traditional Chinese medicine, the disease involves the five viscera and six internal organs, and is closely related to the brain, spleen, stomach and large intestine. In clinical practice, TCM practitioners use single or multiple modalities in combination, based on individual patient differences, four diagnoses, evidence-based treatment, and cutting the root of the problem, with significant efficacy, reduced recurrence rate, and good prognosis. The following is a review of TCM treatment options for post-stroke complications of constipation.

Table 1: Western etiology of post-stroke constipation

Various theories	Academic Advocacy
Lifestyle and body function	1. Reduced activity 2. Weakness of pelvic floor muscles 3. Change in diet structure
Neurology and Endocrinology	1. Assertion of autonomic nervous system dysfunction 2. Decreased intestinal secretion function 3. Effects of the "brain-gut axis" neural pathway
Microorganisms	Alterations in the intestinal microbiota

2. Traditional Chinese Medicine Internal Treatment

After reviewing a large amount of relevant literature in recent years, the author found that post-stroke constipation is different from the occurrence of simple constipation, so it is concluded that deficiency of qi and blood, deficiency of qi and blood stasis, phlegm and heat in the internal organs, and deficiency of kidney and yang are the most common types of evidence, see Figure 3, and most of them are treated by benefiting qi and blood, tonifying qi and blood, ventilating heat in the internal organs, and warming the kidney and transporting the spleen.

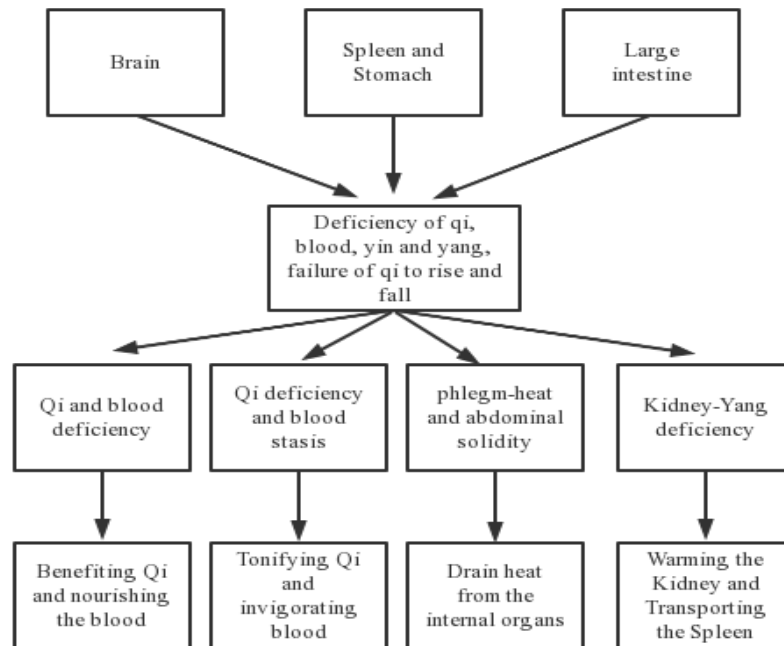


Figure3: Chinese medicine pathogenesis and diagnosis and treatment

2.1. Full of qi and blood conduction

The "Essential Readings in Medicine" [4] states that "after illness, qi and blood have not been restored are able to secret knots. The deficiency of qi and blood caused by stroke, one in the intestines and bowels is not moistened, the stool does not pass; the other is in the spleen and stomach see poor transportation, fluid source of deficient, intestinal fluid deficiency resulting in difficult to go down. Therefore, the treatment is to benefit Qi and Blood, moisten the intestines and open the bowels. Du Hui [5] collected 92 patients with constipation after stroke with deficiency of qi and blood and randomly divided them into 2 groups, in the control group, phenolphthalein tablets (100-200 mg/time, once/day, at bedtime) were given, while in the treatment group, Bazhen Tang (Angelica sinensis 20 g, Radix Rehmanniae 20 g, Rhizoma Atractylodes Macrocephala and Radix Paeoniae Alba 12 g each, Poria and Rhizoma Ligustici Chuanxiong 9 g each, Ginseng 10 g, Radix Glycyrrhiza Uralensis 5 g) was given. Gao Shubing [6] treated 51 patients with post-stroke constipation with the combination of tonifying Zhong Yi Qi Tang with Zengliang Tang plus reduction (15 g of Dang Ginseng, 40 g of Atractylodes Macrocephala, 25 g of Xuan Shen, 3 stalls of Medlar, 6 g of Citrus Aurantium, 60 g of Astragalus, 10 g of Chen Pi, 2 stalls of Angelica, 30 g of Shengdi, 6 g of Radix Platycodon, 9 g of roasted licorice) and the control group was given Rhubarb Soda Tablets (produced by Nanning Kangnuo Biochemical Pharmaceutical Co., Ltd, 2 tablets/time, 2 times/day, before meals); after 2 weeks of treatment, the observation group had good treatment effect and no recurrence after stopping the drug.

2.2. Blood flow is smooth and constipation is removed

Blood Evidence [7]: "There is evidence of blood stasis and closure with internal blood stasis, stagnant accumulation, and closed stools". It is pointed out that qi deficiency and blood stasis is the pathogenesis of constipation after stroke. The prolonged illness of stroke consumes qi and injures blood,

resulting in qi deficiency and weakness, and blood loss of propulsion, resulting in internal stagnation of blood stasis and obstruction of fluid distribution, which makes it difficult to pass stool. Li Zibin^[8] used this treatment principle to treat 35 patients with post-stroke constipation of the qi deficiency and blood stasis type by using a self-prepared formula (30 g each of Astragalus membranaceus and Ocimum sanctum, 15 g each of Chuanxiong Ligustici, Citrus aurantium, Atractylodes macrocephala, Radix et Rhizoma Paeoniae, Yam, Radix Platycodon grandis, Radix Angelicae Sinensis, 12 g each of Houpu and Taoren, 10 g of Radix et Rhizoma sanguinis, 9 g of Rhubarb, and 6 g of Glycyrrhiza glabra) in combination with conventional treatment, and 35 patients were treated with lactulose oral solution (10 ml/dose, 3 times/day, from Abbott Biologicals) as a control. Zhao Jinhong^[9] took Tonic Yang Returning Five Laxative Soup (Astragalus membranaceus 30 g, Radix Angelicae Sinensis 10 g, Peach kernel 6 g, Safflower 6 g, Radix Paeoniae 10 g, Chuanxiong 6 g, Dilong 6 g, Fire Ma Ren 30 g, Citrus aurantium 10 g, Alligator Piper 10 g, Glycyrrhiza glabra 6 g) to treat 40 inpatients with Qi deficiency and blood stasis symptoms of post-stroke constipation, and the control group used Lactulose Oral Liquid (made by Abbott Bio, 10 ml/dose, 3 times/day), and the results after 4 weeks of intervention showed that Tonic Yang Returning Five Laxative Soup could effectively improve Qi deficiency and blood stasis symptoms and relieve constipation.

2.3. Dispersing heat, dispersing phlegm and eliminating stagnant stools

It is common in stroke that phlegm and heat close the orifice, because the evil of phlegm and heat disturbs the brain orifice, at the same time, the evil Qi stagnates in the large intestine, the heat burns the fluid, the internal Qi is blocked, and the stool accumulates and is difficult to go down. Chen Pei et al.^[10] randomly divided 317 patients with phlegm-heat and internal organs type post-stroke constipation into 2 groups, in the control group (106 cases), glycerin enema (40 mL/time, once daily) or oral lactose oral solution (15 ml/time, once daily) was added to the conventional standard medical care and rehabilitation treatment, while in the test group (211 cases), in addition to the conventional standard medical care and rehabilitation treatment, oral administration of Xingguo Chengqi Tang (10 g of rhubarb, 30 g of guajou, 10 g of manganese, 6 g each of qiangwu and biliary nancellus) for 3-6 days, and evaluated on the 3rd, 5th and 30th days of treatment. Tan Jing et al.^[11] used Tong Sheng Fang (Fang Feng, Da Huang, Hou Pu, Gardenia, Red Peony, Tiger Balm, etc.) in the nasal or oral treatment of 30 inpatients with constipation after stroke (middle visceral closure evidence), and the control group used Angong Niu Huang Wan (produced by Guangzhou Baiyunshan Zhongyi Pharmaceutical Co., Ltd., 1.50 g/time, 3 times daily, nasal or oral), both groups were given basic Western medicine treatment, and the 3rd and 7th day of treatment were The scores of relevant clinical symptoms of patients were recorded on the 3rd and 7th day of treatment, and the scores indicated that the treatment group was better in improving the symptoms of constipation, indicating that Tong Sheng Gao could relieve the defecation of patients with post-stroke constipation.

2.4. Kidney evaporation, spleen transportation, and lowering of turbid Qi

The kidneys and spleen are the basis of the first and second heaven of the human body, respectively, and the medical case of I.C. Chang^[12] states that "the decay of the spleen and stomach is especially dependent on the steam change of the true yang in the kidneys". The kidney yang warms the earth, if the kidney yang is deficient, the spleen is not healthy, the internal Qi is not smooth, it is difficult to pass stools. Wang Yongzheng^[13] received 60 patients with post-stroke constipation, in the control group, polyethylene glycol 4000 (produced by Beaufour Ipsen Pharmaceutical Co Ltd; 10 g/dose, twice a day) was given orally as a volumetric laxative, while in the observation group, Kidney Laxative Soup (Cistanches 30 g, Angelicae 30 g, Astragalus 30 g, Rhizoma Atractylodis Macrocephalae 30 g, Peach kernel 12 g, Citrus Aurantium 12 g, Huai Niu Kne 15 g, Zedoary 6 g, Shengma 6 g) was given on this basis. After 3 months of intervention, the total effective rate of Yi Kidney Laxative Tang group was better than that of the control group; after 3 months of discontinuation, the recurrence rates of the disease in the observation group and the control group were 6.67% and 20.00%, respectively; 6 months after discontinuation, the recurrence rates were 10.00% and 36.67%, respectively. The results demonstrated that Yi Kidney Laxative Soup was effective in slow transmission constipation of the colon after stroke and reduced the recurrence rate of the disease. The results demonstrated that Yi Kidney Laxative Soup was effective in slow transmission constipation of the colon after stroke and reduced the recurrence rate of the disease. Yang Ying et al.^[14] treated 40 patients with post-stroke constipation (kidney yang deficiency type) with Ji Chuan Decoction (20 g of Huai Niu Knee, 15 g of Cistanches, 10 g each of Fire Ma Ren, Shu Di, Di Long, Dan Shen, Red Flower, Sheng Ma, Chuan Xiong, and Citrus aurantium, 12 g each of Angelicae and Ze Di, and 5 g of Glycyrrhiza glabra) and

conventional treatment for stroke and conventional intervention for constipation in the control group. After 4 weeks of treatment, the disappearance rate of constipation was 72.50% and 40.00% in the observation group and the control group, respectively. The proportion of bifidobacteria and 5-hydroxytryptamine in the stool of the observation group was better than that of the control group, indicating that Jichuan Decoction was effective in patients with post-stroke constipation with kidney yang deficiency.

3. External treatment

The treatment of post-stroke constipation in TCM is rich and varied, including acupuncture, tui-na, acupuncture point application, Chinese herbal enema, auricular pressure, and external treatments such as medium-frequency therapy, see Table 2, which are safe, easy to use, economical, and highly acceptable to patients, and worthy of clinical implementation.

Table 2: Types of external treatments for post-stroke constipation

External treatment	Specific treatment methods
Acupuncture Treatment	1. tabbing method 2. Moxibustion
Tui Na manipulation treatment	Abdominal Tui Na
Acupressure points	Externally applied to the umbilicus
Chinese herbal enema	Treatment with mannitol solution enema
Ear acupressure	Ear acupressure points and care
Others	1. Medium frequency electrical stimulation 2. Multi-Method Joint

3.1. Acupuncture Treatment

3.1.1. Stabbing method

Acupuncture is an irreplaceable treatment tool in traditional Chinese medicine, the Ling Shu ^[15] states that "the key to using needles is to know how to regulate yin and yang", and that needling local acupuncture points can achieve the effect of opening the meridians, regulating yin and yang, and pacifying the positive and negative, which ultimately plays a role in harmonizing the whole body's qi, blood, yin and yang, and accessing the internal organs.

3.1.1.1. Body Acupuncture Treatment

Ye Ga Xi ^[16] treated 35 patients with constipation after ischemic stroke in group A (treatment group) with acupuncture (Nei Guan, Bai Hui, Shang Xing, Yin Tang, Zhong Gua, Qi Hai, Tian Shu, and Foot San Li, depending on the type of acupuncture point) and group B with normal acupuncture (Tian Shu, Shang Ju Xu, San Yin Jiao, Zhi Gou, Da Intestinal Yu, and Zhao Hai, depending on the type of acupuncture point). The results of the follow-up after 4 weeks and 12 weeks showed that the Bristol stool form scale (BSFS), the Patient assessment of constipation quality of life scale (PAC-QOL), and the patient assessment of constipation quality of life scale (PAC-QOL) of the subjects in the two groups were all measured. Quality of life (PAC-QOL) scores decreased compared with those before treatment, indicating that acupuncture can significantly alleviate the constipation symptoms after stroke. Jenny Zheng ^[17] selected 80 cases of post-stroke constipation and randomized them into two groups, the observation group was treated with the acupuncture method of "opening and clearing the internal organs" (selected from Baihui, Sishencong, Tongtian, Luoja, Tianshu, Daheng and Qihai), and the other acupuncture points of Tianshu, Shangjuxu, Zhigou, Daoyu and Zhaohai were selected as the control group. The results showed that the constipation severity scale (CCS), patient assessment of constipation symptom (PAC-SYM) and PAC-QOL decreased in both groups compared with those before treatment, indicating that the acupuncture method could improve the clinical symptoms related to post-stroke constipation.

3.1.1.2. Abdominal Acupuncture Treatment

"The abdomen, the essence of life, is the root of all diseases." The abdomen contains a variety of internal organs and is also the location of several meridians, so abdominal acupuncture combines the regulation of internal imbalances with peripheral qi and blood meridians to further prevent and treat diseases by stimulating the relevant acupoints in the abdomen ^[18]. Xiong Jinhua ^[19] took abdominal

acupuncture. 2 groups in the upper jiao zone (2 groups in the area from the line of the two nipples to the horizontal line of 5 inches above the middle of the umbilicus, the midpoint of the line between Tanzhong and Zhongting, and the Juqui point and its left and right side opening of 0.5 inch), 1 group and 2 groups in the middle jiao zone (3 equal points in the area from 5 inches above the middle of the umbilicus to the horizontal line of the middle of the umbilicus and its left and right side opening of 0.5 inch), and 1 group and 2 groups in the lower jiao zone (3 equal points from the Shenqui point to the Qubone point and its left and right side opening of 0.5 inch) Treatment of 35 patients with post-stroke constipation of the qi deficiency type was compared with ordinary acupuncture (Shouhai, Zhonggui, Zhigou, Tianshu, Shangjiu, depending on the type of matching acupuncture point) as a control, and after 4 weeks all outcome scores in both groups were significantly lower, and the abdominal acupuncture group was significantly lower than the ordinary acupuncture group.

3.1.1.3. Head Acupuncture Treatment

"The head is the house of essence" and "all the essences return to the brain".The head is connected to the organs and limbs through meridian conduction, and is a key part in regulating the body's qi, blood and yin and yang. By stimulating specific points on the head, the function of the internal organs can be stimulated and the qi, blood and yin and yang can be balanced. Lu, Yang, Tonghui ^[20] selected 60 cases of post-stroke constipation patients, and after randomized grouping, in the control group, the "Tune Shen Tongqi" acupuncture method was used (selected from double Neiguan, Renzhong, affected Sanyinjiao, left water channel, left Guilai, left external water channel, left external Guilai, double Feisanli, double Fenglong, affected Jiquan, affected Shuzhe, and Guizhong), and in the observation group, the clinical effect was better than that of the control group after 12 days.

3.1.1.4. Eye Needle Treatment

The Ling Shu ^[21]: "Twelve meridians, three hundred and sixty-five lows whose essence and yang energy go up to the eyes and are the eyes". The whole body meridians are directly or indirectly connected to the eyes, so stimulating the eye points can achieve the effect of regulating the qi and blood of the meridians. The whole body meridians are directly or indirectly connected to the eyes, so stimulating the eye acupuncture points can achieve the effect of regulating the meridians and qi and blood. Li Jiqi ^[22] treated 30 patients with post-stroke constipation with eye acupuncture (selected large intestine, upper jiao, lower jiao, and spleen acupuncture points). Compared with a control group that simply took hemp seed pill (500 g of fire hemp seed, 250 g of peony, hedgehog, rhubarb, thick park, and almond, finely powdered and honeyed into a pill, 9 g/time, 1 time/day), the eye acupuncture group showed a significant decrease in the symptom score after 2 weeks of treatment; therefore, eye acupuncture is desirable in improving the symptoms of post-stroke constipation, and the treatment process is simple, easy to perform, and effective.

3.1.1.5. Acupuncture point of the eight pins

The "Golden Needle and Plum Blossom Poetry Copy" ^[23] recorded: "The main treatment function of the eight sots is to encompass all kinds of diseases, several of which are not covered. Post-stroke constipation is mainly in the large intestine, and the eight points in front of the rectum, stimulating direct access to the foci of the disease, in order to play the effect of moving gas and stagnation. Chen Ziqing ^[24] included 66 patients with post-stroke constipation, and after grouping them, the treatment group was treated with acupuncture at the eight acupoints and the control group was treated with normal acupuncture (selected from Tianshu, Shang Juxu, Zhigou, and Daoyu); after 2 weeks, the total effective rate was 93.93% in the acupuncture at the eight acupoints group and 87.50% in the control group, indicating that acupuncture at the eight acupoints improved the overall symptoms and function of post-stroke constipation.

3.1.2. Moxibustion

The Ling Shu - Guan Neng ^[25] says: "What the needle does not do, moxibustion does". It shows that acupuncture and moxibustion each has its own role to play, and that they are complementary and irreplaceable. Currently, rhubarb moxibustion and heat-sensitive moxibustion are mainly used, all of which can improve the symptoms of post-stroke constipation. Li Zhuangmiao ^[26] treated 40 patients with post-stroke constipation by combining basic treatment and nursing care with moxibustion (moxibustion with rhubarb, ginger cake, and moxa cones in a 14 cm × 5 cm rectangular area centered on the Shenqu acupuncture point to the bilateral Tianshu acupuncture points), and the control group was treated with conventional interventions only, and the total effective rate of the moxibustion group was outstanding after 2 weeks compared with the control group, indicating that moxibustion in the Shenqu acupuncture point area of rhubarb can improve the symptoms related to defecation in patients

with stroke constipation. Zhang Jiyu ^[27] included 80 patients with post-stroke constipation, who were randomly grouped and given the appropriate basic treatment, the control group was treated with acupuncture (Tianshu, Sanyinjiao, Zhigou, Qihai, and Feosanli), while the study group was treated with thermosensitive moxibustion (rotary moxibustion, bird pecking moxibustion, round-trip moxibustion for 2 min, followed by mild moxibustion) on top of the control group. This technique does not touch the human epidermis and does not cause invasive injuries. No serious adverse effects have been found, and it is expected to become a new clinical alternative to acupuncture in the future.

3.2. Tui Na manipulation treatment

Tui na is one of the traditional therapies in Chinese medicine, which has the effect of regulating the phytoncotic nerves, among which the abdomen is the preferred site for intervention in gastrointestinal diseases; it was found that in addition to directly penetrating the stomach and intestines, improving abdominal blood circulation, accelerating intestinal peristalsis, and enhancing abdominal muscle strength, abdominal tui na can also regulate parasympathetic nerve function to a certain extent, thereby achieving the goal of preventing and treating constipation ^[28], its controlled operation, versatile techniques, and wide range of applicable people cannot be underestimated in clinical use. Bu Yun et al. ^[29] included 150 patients with post-stroke constipation and randomly divided into three groups, the control group 1 was given conventional treatment + Ziwu Liuin Tui Na, the control group 2 was given conventional treatment + Shenqui intermittent ginger moxibustion, and the test group was given basic treatment + Ziwu Liuin Tui Na + Shenqui intermittent ginger moxibustion. After 4 weeks of treatment, the total effective rates of the test group, control group 1, and control group 2 were 88.00%, 72.00%, and 68.00%, respectively. After treatment, the time between bowel movements, speed of bowel movements, difficulty of bowel movements, and bowel movement scores were all lower than those before treatment.

3.3. Acupressure

Acupressure is another kind of Chinese medicine, based on the idea of "holistic and dialectical", through local stimulation, acupuncture point stimulation, meridian conduction and transdermal absorption, to achieve the effect of sufficient qi and blood, smooth meridians and balanced internal organs. Fu Yinglan ^[30] included 94 patients with symptoms of dyspareunia after stroke and randomly divided into a study group and a control group, in the control group, lactulose oral solution (made by Abbott Biologicals, 10 mL/dose, 3 times a day) was used, and in the study group, Xingqi laxative patch (raw rhubarb powder and honey) was applied externally to the umbilicus, and the duration of bowel movement in the study group was significantly reduced and the frequency was significantly increased after 5 days of treatment.

3.4. Chinese herbal enema

Chinese medicine enema therapy directly contacts the rectal mucosa with the Chinese medicine soup, which has the characteristics of good absorption and quick effect, and has precise clinical efficacy. Wu Qinjuan ^[31] used mannitol solution (30 g of mannitol dissolved in 400 ml of warm boiled water at 39 °C~41 °C) to treat 20 patients with constipation after stroke by enema, and the control group received oral rhubarb mannitol oral solution, and the results showed that the average time spent on defecation in the enema group was shorter than that in the control group, indicating that the enema of Chinese medicine mannitol solution was an effective way to shorten the hospitalization time, average defecation time, and improve the treatment efficiency in patients with constipation after stroke.

3.5. Ear acupressure

"The ear is the gathering of the clan chakra." The ear is densely divided into meridians, and all the meridians of the body are connected to the ear, so stimulation of the ear points can also have the effect of regulating the qi and blood of the body and the physiological functions of the internal organs. The preparation and operation of auricular seed pressure is simple, safe and effective, and is now widely used in clinical practice. Gu Rong ^[32] took 61 patients with post-stroke constipation and divided them into 2 groups according to the care plan, in the control group, the frequency of bowel movements and bowel sounds in the observation group was higher than that in the control group, and the incidence of constipation was reduced to 3.23% after 2 weeks of treatment. This indicates that auricular acupressure can effectively improve defecation in patients with post-stroke constipation.

3.6. Other aspects

3.6.1. Medium frequency electrical stimulation

IF electrical stimulation has the function of regulating peripheral nerve fibers and improving local blood flow, which does not produce dependence and has less side effects compared to drugs, and can effectively improve intestinal function. He Xiaoming [33] used a randomized grouping method to divide 84 patients presenting with dyspareunia after stroke into 2 groups, in the control group, general treatment was given, and in the intervention group, IF treatment was combined with IF treatment (double Guanyuan points, Tianshu points, Qihai points and Zhonggui points, using a computerized IF treatment instrument of Shijiazhuang Fusai Medical Equipment Co., Ltd, with a frequency of 2 kHz and a current of 80 mA, whichever the patient could tolerate, 20 min/time, 2 times/day).

3.6.2. Multi-Method Joint

For some patients with more persistent symptoms of constipation, a combination of multiple interventions is often used to achieve high efficacy and speed. Yang Yanxi et al. [34] used acupuncture combined with pelvic floor biofeedback (using a French PHENIXUSB4 neuromuscular biofeedback electrostimulator, frequency 20 Hz, pulse width 200 ms, 30 min/time, 2 times/day) to treat 40 patients with post-stroke constipation, the control group was given biofeedback therapy only, and after 4 weeks, the patients in the combined group had lower scores of difficult defecation, incomplete defecation, bloating, and stool properties than the control group, indicating that the efficacy of acupuncture combined with pelvic floor biofeedback was considerable. Du Jing et al. [35] treated 40 patients with post-stroke constipation using intradermal acupuncture (selected from Tianshu, Zhonghua, Daheng and Abdominal Knot) combined with bowel training, in the control group, daily care was provided, and after 2 weeks, the quality of survival score, constipation symptom score and clinical efficacy of the observation group were significantly better than those of the control group, indicating that the combination of intradermal needle and defecation training could significantly improve the symptoms of post-stroke constipation and patient's quality of survival.

4. Summary

Constipation is a common complication of stroke and is often underestimated; constipation is associated with increased intra-abdominal pressure and increased myocardial contraction and blood pressure, which may trigger the recurrence of stroke. Western medicine mostly uses a combination of prokinetic drugs and intestinal lubricants, such as cortisone, lactulose, phenolphthalein tablets, etc. In the long run, patients are prone to drug dependence and the long-term effect is not ideal. TCM adopts its very characteristic discriminative treatment, combined with the information obtained from the four clinics, to cut its root, which has an irreplaceable advantage in the treatment of post-stroke constipation. Its therapies are in various forms, including external treatment such as acupuncture, massage, acupressure, Chinese herbal enema and auricular pressure, in addition to internal prescriptions. the possibility of secondary stroke and other complications, which can significantly improve both psychological and physical pain of patients, improve the quality of life and prolong the survival period. In conclusion, Chinese medicine has a profound theoretical foundation in the treatment of post-stroke constipation, with precise clinical efficacy and good feedback in practical application. Therefore, the application of Chinese medicine in the treatment of post-stroke constipation has unique advantages and broad prospects and is worthy of promotion and application by our compatriots.

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