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Chinese medicine in the treatment of gastrointestinal dysfunction after gastric cancer surgery

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Abstract: Surgery is the most important method for the treatment of gastric cancer, but a series of complications will occur after gastric cancer surgery. The most common complication is gastrointestinal dysfunction, which seriously affects the quality of life and rehabilitation of patients. As a traditional treatment method, the role of Chinese medicine in the treatment of gastrointestinal dysfunction after gastric cancer surgery has been gradually recognized in recent years. This article will review the research progress of Chinese medicine in the treatment of gastrointestinal dysfunction after gastric cancer surgery, including the application of Chinese medicine treatment, acupuncture treatment, acupoint application and so on, in order to provide reference for the treatment of gastrointestinal function after gastric cancer surgery.

Keywords: Gastric cancer; Chinese medicine; Postoperative complications; Gastrointestinal dysfunction; Acupuncture

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Gastric cancer is a malignant disease caused by declined healthy Qi, combined with improper diet and moodiness. The base pathogenesis is the Qi stagnation, phlegm dampness and blood stasis in stomach, which caused the failure of stomach Qi to descend. Main clinical manifestations of gastric cancer include distension, fullness or pain in epigastrium, anorexia, emaciation, black stools, and accumulation in epigastrium [1]. In Chinese medicine, gastric cancer belongs to the categories of “dysphagia (yege, 噎膈)”, “abdominal mass (zhengjia, 癥瘕)”, “casting up of undigested food (fanwei, 反胃)”, “accumulation (jiju, 积聚)”, “stomachache (weiwanton, 胃脘痛)”, “swelling of thigh (fuliang, 伏梁)” and “distention and fullness in chest and abdomen (xinfupi, 心腹痞)”. Gastric cancer is caused by long-term stimulation from various factors such as external contraction and internal injury on the basis of spleen and stomach deficiency. *The Nature of Excess and Deficiency*, *The Yellow Emperor's Classic of Medicine* believed that “if you encounter patients with chest and epigastric fullness and an obstruction condition, this is usually caused by emotional trauma”. *Synopsis of the Golden Chamber* described as “The patients with wiry pulse is deficient, have no extra stomach Qi. At night, they will vomit what they eat at morning. The disease will change to gastric regurgitation”. In the treatment, formula such as *Da Banxia* decoction for treating gastric regurgitation and

vomiting from *Synopsis of the Golden Chamber*, *Xuanfu Daizhe* decoction from *Treatise on Febrile Diseases*, *Huatuo Weifan Wibing* recipe [including Xionghuang (realgar), Zhenzhu (margaritifera), Dansha (cinnabaris), Mangxiao (mirabilite)] from *Yibu Quanlu*, and *Yege Fanwei* decoction [including Naosha (sal-ammoniac) and Binglang (*Arecae Semen*)] from *Compendium of Materia Medica*, still have reference value for current clinical and experimental research.

Surgery is the main treatment method for gastric cancer patients, but surgical trauma can trigger a gastrointestinal stress reaction, and the increase of catecholamine can lead to gastrointestinal mucosal ischemia and necrosis. Prolonged exposure of intestinal tube during operation can cause inflammation (such as infection). In addition, postoperative vaginal nerve damage, alteration of digestive tract anatomical structure, delayed gastric emptying, and destruction of gastroesophageal anti-reflux mechanism may lead to postoperative gastrointestinal dysfunction [2-3]. Symptomatic treatment is a commonly used therapy in Western medicine, including gastrointestinal decompression and taking drugs such as gastric motility drugs, anti-emetic drugs or gastric mucosal protective agents, etc., which has limited therapeutic effect on gastrointestinal dysfunction.

The gastrointestinal dysfunction after gastrectomy

can be classified as "intestines retention (changjie, 肠结)" and "abdominal bloating (fuzhang, 腹胀)", with the pathogenesis of healthy Qi deficiency, dysfunction of spleen and stomach, Qi of Fu-organs descending [4]. Research has shown that there are various types of Chinese medicine syndromes after gastric cancer surgery, including spleen and stomach qi deficiency type, liver stomach disharmony type, stomach yin deficiency type, intermingled phlegm and blood stasis type, and Qi and blood deficiency type [5]. The treatment methods of patients with different syndrome types are different. Chinese medicine treatment of gastric cancer postoperative gastrointestinal dysfunction mainly includes Chinese materia medica for oral administration or enema, application, ear acupoint massage, acupuncture and so on [6]. A number of studies have confirmed that the early use of Chinese medicine intervention has the effects of invigorating the spleen and harmonizing the stomach, reinforcing Qi and enriching blood, promoting blood and eliminating phlegm, removing toxic substances to disintegrate a mass, and can improve the nutritional status, immune function and quality of life [7-8]. This article reviews the research progress of Chinese medicine in the treatment of postoperative gastrointestinal dysfunction in recent years.

1 Oral administration of Chinese materia medica

The composition and action of Chinese medicine prescriptions are complex, with multiple action sites, and have various comprehensive effects such as tonifying liver and kidney, promoting blood circulation and removing blood stasis, clearing heat and toxic materials, etc., which can effectively improve gastrointestinal dysfunction after gastric cancer surgery, accelerate the recovery, and improve the quality of life of patients. Common Chinese medicine formulations include decoctions, pills, powders, granules, etc. The postoperative medication rule for gastric cancer mainly focuses on reinforcing the healthy Qi to eliminate pathogenic factors, or to invigorate the spleen. The most common types of drugs for removing pathogens include resolving phlegm and disintegrating masses, clearing heat and toxic materials, and promoting blood circulation and removing blood stasis [5]. Xia *et al.* [9] studied patients with gastrointestinal dysfunction of Qi stagnation and blood stasis syndrome after gastric cancer surgery and found that the total effective rate of patients in the observation group was higher than that in the control group after *Shenhuang* Decoction was added (96.55% vs 72.41%, $P < 0.05$). The recovery time of bowel sound, anal exhaust time, abdominal distension duration and start feeding time were significantly shortened compared with the control group, and the Chinese medicine syndrome score was reduced.

Shenhuang decoction is composed of Shengshaishen (sundried ginseng), Danshen (*Radix Et Rhizoma*), Houpo (*Magnoliae Officinalis Cortex*), Shengdahuang (*Rhei Radix et Rhizoma*), Dingxiang (*Flos Caryophylli*), Zhishi

(*Fructus Aurantii Immaturus*), and Wuzhuyu (medicinal evodia fruit). The sundried ginseng can reinforce Qi and invigorate the spleen, while Danshen promotes blood circulation and removing blood stasis. Shengdahuang has a bitter cold nature and can be laxative, while Houpo can descende Qi and fullness. Zhishi can promote Qi circulation and reduce distension. Dingxiang and Wuzhuyu have the effects of relieving vomiting, turbidity, dissipating cold to kill pain. The combination of these drugs has the effects of reinforcing Qi and invigorating the spleen, and eliminating pathogenic without harming the healthy Qi. Qiu *et al.* [10] used *Fuzheng Shunqi* Decoction to treat postoperative gastrointestinal dysfunction in elderly patients with gastric cancer, and the results showed that compared with the control group, the recovery time of gastrointestinal function in the observation group was shorter, the scores of abdominal distention, nausea and vomiting and other symptoms were reduced, and the score of postoperative gastrointestinal dysfunction (POGD) was decreased. *Fuzhengshunqi* decoction contains Dangshen (*Codonopsis Radix*), Huangqi (*Astragalus Radix*), Xiyangshen (American ginseng), Qingpi (green tangerine peel), Danggui (Chinese Angelica), Danshen (*Radix Et Rhizoma*), Dahuang (*Rhei Radix et Rhizoma*), Mangxiao (mirabilite), Shanzha (Chinese Hawthorn Fruit), Zhishi (*Fructus Aurantii Immaturus*), Chenpi (*Pericarpium Citri Reticulatae*), Sharen (*Amomi Fructus*), Gancao (*Radix Glycyrrhiza*) and so on. Dangshen, Huangqi and Xiyangshen invigorating spleen Qi and supplementing the original Qi; Danggui can enrich and promote blood circulation, Danshen can activate blood circulation to remove blood stasis, Qingpi can regulating stomach descend Qi, Shanzha can move Qi to disintegrate masses, Chenpi can invigorate spleen and harmonize stomach, and Sharen can warm spleen and stomach. Xu [11] *et al* gave *Lizhong* Decoction combined with *Liujunzi* Decoction to patients with gastrointestinal dysfunction after gastric cancer surgery, and the results showed that the recovery time of bowel sound, the time of first anal exhaust and the time of first defecation in the observation group were earlier than those in the control group. *Lizhong* Decoction combined with *Liujunzi* Decoction include Banxia (*Pinelliae Rhizoma*), Chenpi, Fuling (*Poria*), Baizhu (*Rhizoma Atractylodis Macrocephalae*), Renshen (ginseng), Ganjiang (dried ginger), Zhigancao (*Glycyrrhizae Radix Et Rhizoma Praeparata Cum Melle*), *et al.* Liang *et al.* [12] injected *Renshen Dahuang* decoction into naso-gastrojejunal nutrition tube in patients with gastric cancer after surgery, and the results showed that gastrointestinal failure (GIF) score, Chinese medicine syndrome score and clinical efficacy were significantly better than those in the control group receiving conventional treatment. *Renshen Dahuang* decoction uses processed red ginseng and wine-treated rhubarb. Red ginseng is steamed ginseng, which can supplement original Qi. Wine-treated rhubarb has mild potency of a medicinal substance, which can activate blood circulation and remove toxic materials, restore the spleen and stomach rise and fall. In addition, the use of

Buzhong Yiqi decoction can accelerate the recovery of gastrointestinal function and improve the nutritional status of gastric cancer patients with Qi deficiency and blood stasis syndrome [13]. Many studies have investigated the effect of taking Chinese medicine on postoperative gastrointestinal disorders of gastric cancer, but the formula used are very differently, which may be related to the different syndromes of patients, but they all show more significant clinical efficacy than the control group.

2 Enema of Chinese materia medica

Enema of Chinese materia medica is one of the "inducing bowel movement" of Chinese medicine, which has been recorded as early as in *Treatise on Febrile Diseases*. For patients with difficulty or inability to eat orally, Chinese materia medica enema can be used to absorb the drug directly through the rectal mucosa, which has fast effect and simple operation, and is conducive to gastrointestinal decompression. Qiao *et al.* [14] performed *Jianpi Yiqi* decoction enema treatment on patients with gastric cancer after total resection. *Jianpi Yiqi* decoction include Huangqi, Dangshen, Baizhu, Fuling, Lingzhi (*Ganoderma Lucidum*), Chenpi, Banxia, Houpo and Sharen. Retention enema was performed three times a week. The results showed that abdominal distention, abdominal pain, nausea and vomiting scores in the enema group were lower than those in the control group, and intestinal function was significantly improved. The nutritional status and quality of life in enema group were better than the control group.

The study of Zhang *et al.* [15] showed that electro-acupuncture stimulation combined with retention enema (once in the morning and once in the evening) with compound *Dachengqi* Decoction [include Houpo, Laifuzi (radish seed), Zhiqiao (*Fructus Aurantii*), Chishao (*Paeoniae Radix Rubra*), Mangxiao, Taoren (peach seed), Dahuang] could significantly shorten the postoperative anal exhaust time, bowel sound recovery time and defecation recovery time for patients after radical gastrectomy, and the incidence of abdominal distension was lower than that of the control group. The study of Chen *et al.* [16] showed that *Xiaochengqi* decoction (Dahuang, Houpo, Zhishi, Danpi, Chishao) was used on the basis of conventional treatment. The total effective rate of the retention enema treatment group was higher than that of the control group (92.3% vs 82.1%), and the recovery time of bowel sound and anal exhaust defecation was shorter, which was conducive to the recovery of gastrointestinal function after operation.

Enema of Chinese materia medica can not only avoid direct stimulation of gastrointestinal tract, but also effectively protect intestinal mucosa, reduce the release of intestinal inflammatory transmitters, promote intestinal peristalsis, and restore gastrointestinal function quickly.

3 Application of Chinese materia medica

Treating internal diseases by external treatment is one of the main treatment methods of Chinese medicine. "The principle of external treatment is the principle of internal treatment, and the medicine of external treatment is the medicine of internal treatment. The difference between each other is the method. There is no difference in medical theory, but the methods can always be changed" fully affirms the effect of external treatment. External or acupoint application of Chinese materia medica can be used to absorb Chinese materia medica through the skin, stimulate the corresponding acupoints. In the treatment of gastric cancer postoperative gastrointestinal dysfunction, umbilical cord is the commonly used in external application of Chinese materia medica. Because the skin of the umbilical cord is thin and the subcutaneous capillaries are abundant, drugs are easier to enter the capillaries and play a role. Xie *et al.* [17] applied Chinese materia medica powder for regulating qi and strengthening spleen to the umbilical cord of patients after gastric cancer surgery. Two weeks after discharge, symptom scores (abdominal distension, fullness after eating, nausea, heating and fatigue) of patients in the external application group were better than those in the control group, and plasma motilin level was higher than that in the control group [(351.73±34.75) pg/mL vs (302.64±20.17) pg/mL], while plasma vasoactive intestinal peptide level was lower [(33.56±6.12)pg/mL vs (36.75±5.43) pg/mL]. This study showed that Chinese materia medica can be absorbed through the skin, and then improve the gastrointestinal motility and promote the recovery of intestinal function by regulating the secretion of gastrointestinal hormones. Du *et al.* [18] studied the treatment of gastrointestinal dysfunction after gastric cancer by applying Chinese medicine patch (Chenxiang, pepper powder, Zhishi, Dingxiagn, Danshen, Houpo, Wuzhuyu, Shengdahuang, Rensheng) to Shenque acupoint, and the time of first postoperative exhaust, defecation, and postoperative first fluid and semi-fluid intake time were shorter than those of the control group. Shenque acupoint is located in the umbilicus, and the use of application of Chinese materia medica at Shenque acupoint can improve the clearance and reduce turbidity, invigorate the spleen and activate the stomach, and restore the gastrointestinal function as soon as possible. In the study of Xiang *et al.* [19], the postoperative intestinal function recovery time and hospital stay of gastric cancer patients in the observation group treated with Shenhuang Powder applied to Shenque point were shorter than those in the control group.

In addition to Shenque acupoint of umbilical cord, Zusanli, Sanyinjiao, Neiguan and other acupoints can also be used to treat postoperative gastrointestinal dysfunction. In addition to Shenque point, other acupoint application can also treat gastrointestinal dysfunction. Zhao *et al.* [20] mixed Xiaohuixiang (*Foeniculi Fructus*), Wuzhuyu, Rougui (*Cinnamomum cassia Presl*), Dingxiang and Aiye (mugwort) powder into paste and applied it to Zusanli, Sanyinjiao, Neiguan, Shangjuxu, Xiajuxu and other acupoints to treat patients with gastric cancer after radical surgery. The postoperative recovery time of intestinal

sound, anal exhaust time and gastric tube removal time were significantly shortened compared with the control group. Zusanli is the main acupoint of stomach channel, which has the effect of generating stomach Qi and eliminating spleen dampness. Sanyinjiao is often used as the spleen channel acupoint, which has the effect of strengthening the spleen and stomach, moving Qi and activating blood. Neiguan is an acupoint often used in the pericardium meridian and has the effect of regulating the stomach to kill pain. Shangjuxu is on the stomach channel, which has the effect of regulating intestine and stomach and activating meridian. Xiajuxu is on the stomach channel, is the lower He-sea acupoint of small intestine, which has the effect of harmonizing Qi and blood, activating meridians and collaterals.

4 Ear acupoint massage

Chinese medicine believes that different meridians of the human body can be reflected in different positions of the ear. Ear acupoint massage is to attach drugs to each auricular point to achieve the effect of dredging meridians and regulating Zang-Fu organs. The clinical application of ear acupoint massage in the treatment of gastrointestinal dysfunction has achieved good results, and the operation is simple, low price, safe and non-invasive. Yuan *et al.* [21] selected stomach points, spleen points, large intestine points, small intestine points, subcortical points, sympathetic points and endocrine points to treat patients with gastric cancer after surgery with ear point compression bean treatment, and the treatment effective rate was significantly higher than that of the control group (97.2% vs 80.0%). The recovery time of bowel sound, the time of starting to eat, the time of first anal exhaust and the time of first anal defecation were shorter than those of the control group. Shi *et al.* [22] treated patients with gastrointestinal dysfunction after gastric cancer surgery with ear point compression of beans, and selected the ear points of endocrine, sympathetic, subcortical, small intestine, large intestine, spleen and stomach, etc. The results showed that the time of upper abdominal distension symptom removal, normal eating time and Chinese medicine syndrome score in the ear point compression group were significantly lower than those in the control group. The effective rate of treatment was higher than that of control group (90.90% vs 68.18%).

Study has shown that Auricular acupoint pressing combined with acupoint massage for postoperative gastric cancer can reduce the decrease of postoperative motilin and substance P and promote gastrointestinal motility, which is beneficial to the recovery of gastrointestinal function [23].

5 Acupuncture and moxibustion

Acupuncture and moxibustion, as one of the Chinese medicine therapies, can stimulate the acupuncture points to regulate the spleen and stomach, reinforce the healthy

Qi to restore the normal function, soothe the channels and activating the collaterals, and move Qi to disintegrate masses, in order to promote the recovery of gastrointestinal function.

A meta-analysis including 16 randomized controlled studies showed that acupuncture can significantly shorten the first exhaust time [$MD = -14.52, 95\%CI(-17.31, -11.74)$], bowel sound recovery time [$MD = -10.50, 95\%CI(-13.99, -7.01)$] and first defecation time [$MD = -13.79, 95\%CI (-20.09, -7.50)$] of patients with gastric cancer after surgery, and reduce the incidence of postoperative nausea/vomiting [$RR = 0.43, 95\%CI (0.28, 0.68)$] and abdominal distension [$RR = 0.41, 95\%CI (0.25, 0.68)$] [7]. However, the effect of different acupuncture methods is different, there are electric acupuncture, moxibustion, warm acupuncture and other commonly used to treat gastrointestinal dysfunction.

Kang *et al.* [8] selected three acupoints of Zusanli, Sanyinjiao and Neiguan for acupuncture or moxibustion in patients after laparoscopic radical gastric cancer surgery, and the results showed that the average exhaust time of patients in the acupuncture group and moxibustion group was 59.41 h and 59.09 h, which was significantly shorter than 64.72 h in the control group. Guo *et al.* [24] selected Zusanli, Shangjuxu, Xiajuxu, Gongsun and Sanyinjiao as the main points to treat patients with gastric residual gastric emptying dysfunction after gastric cancer surgery, which could shorten the time of first exhaust, the time of gastric tube removal, the time of resuming liquid feeding and the postoperative hospital stay. Wu *et al.* [25] selected Shangjuxu on both sides of the lower limbs to treat gastrointestinal dysfunction after gastric cancer with para-needle-row acupuncture method, which included Shangjuxu acupoint, 1 inch above Shangjuxu acupoint, 1 inch below Shangjuxu acupoint, and 0.5 inch inside the above three positions, with the needle tip pointing towards the direction of the giant deficiency. The results showed that acupuncture treatment within 24 h after the operation of gastric cancer could shorten the first ventilation time and the first feeding time, but the length of hospital stay was not significantly shortened. Moreover, continuous waveform monitoring of abdominal and intestinal sounds showed that the fluctuations of abdominal and intestinal sounds of patients returned to normal intestinal peristalsis immediately after acupuncture intervention, indicating that acupuncture treatment could accelerate the recovery of gastrointestinal function.

6 Combination treatment

When the treatment of Chinese medicine alone is not satisfactory, two or more treatments can be combined. According to the study of Li *et al.* [26], compared with the control group treated solely with acupuncture Zusanli, Hegu and Neiguan, the observation group treated with acupuncture combined with *Dachengqi* Decoction can significantly shorten the time of first postoperative venting and defecation, the time of getting out of bed and

hospital stay, increase the serum levels of gastrin and motilin, and improve immune functions such as T cell subsets. Shi *et al.* [27] studied patients with gastroparesis syndrome after subtotal gastrectomy for gastric cancer and found that the recovery time of intestinal sound, disappearance time of abdominal distension and return to normal diet in the observation group treated with "old ten needles" acupuncture combined with metoclopramide hydrochloride injection at acupoint were better than those in the control group.

Zhang *et al.* [28] prospective selected gastric cancer patients with gastrointestinal dysfunction after laparoscopic surgery as research objects, and randomly divided them into ordinary acupuncture group, Dongshi Qi acupuncture treatment group, and combined group (Dongshi Qi acupuncture combined with *Dingshen Fuzheng* Decoction). Patients in the combined group had lower Chinese medicine syndrome scores, shorter eating time, bowel sound recovery time, exhaust defecation time, and getting out of bed activity time. The levels of serum somatostatin and vasoactive intestinal peptide were lower than those of the other two groups, and the difference was statistically significant.

Gastrointestinal dysfunction is a common complication after gastric cancer. The main clinical manifestations are abdominal pain, abdominal distension, gastrointestinal emptying disorder, and slow peristalsis. Chinese medicine treatment can significantly improve the symptoms of abdominal pain and distension, restore gastrointestinal peristalsis, and accelerate gastrointestinal recovery. It also has the function of overall regulation of human immunity and enhancement of human neuro-humoral regulation, reducing the production of inflammatory cells, and increasing the production of hormones that stimulate the gastrointestinal tract (such as motilin), with small toxic side effects, which is safe and reliable.

Conflict of Interest: None

Reference

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· 研究进展 ·

胃癌术后胃肠功能障碍的中医药治疗进展

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摘要: 手术是治疗胃癌的最主要方法,但胃癌术后会出现一系列并发症,最常见的为胃肠功能障碍,严重影响患者的生活质量和康复。中医作为一种传统的治疗方法,近年来在胃癌术后胃肠功能障碍治疗中的作用逐渐被认可。本文对中医治疗胃癌术后胃肠功能障碍的研究进展进行综述,包括中药治疗、针灸治疗、穴位敷贴等方面的应用,旨在为胃癌术后胃肠功能的治疗提供参考和借鉴。

关键词: 胃癌; 中医药; 术后并发症; 胃肠功能障碍; 针灸

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Progress in Chinese medicine treatment of gastrointestinal dysfunction after gastric cancer surgery

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Abstract: Surgery is the most important method for the treatment of gastric cancer, but a series of complications will occur after gastric cancer surgery, the most common complication is gastrointestinal dysfunction, affecting the quality of life and rehabilitation of patients. As a traditional treatment method, Chinese medicine in the treatment of gastrointestinal dysfunction after gastric cancer surgery has been gradually recognized in recent years. This article reviews the research progress of Chinese medicine in the treatment of gastrointestinal dysfunction after gastric cancer surgery, including the application of Chinese medicine treatment, acupuncture treatment, acupoint application and so on, to provide reference for the treatment of gastrointestinal function after gastric cancer surgery.

Keywords: Gastric cancer; Chinese medicine; Postoperative complications; Gastrointestinal dysfunction; Acupuncture

Fund program: Shandong Province Traditional Chinese Medicine Technology Project (2021Q055); Qingdao Traditional Chinese Medicine Research Project (2020-zyy014); Qingdao Medical Research Guidance Program (2020-WJZD092, 2022-WJZD039)

胃癌,是由于正气内虚,加之饮食不节、情志失调等原因引起的,以气滞、痰湿、瘀血蕴结于胃,胃失和降为基本病机,以脘部饱胀或疼痛、纳呆、消瘦、黑便、脘部积块为主要临床表现的一种恶性疾病^[1]。在中医学属于“噎膈”、“症瘕”、“反胃”、“积聚”、“胃脘痛”、“伏梁”、“心腹痞”的范畴,是在脾胃亏虚基础上,长期受到外感、内伤等多种因素的刺激导致的。《素问·通评虚实论》:“膈塞闭绝,上下不通”。《金匮要略·

呕吐啰下利病脉证治》说:“脉弦者,虚也,胃气无余,朝食暮吐,变为胃反”。在治法方面,《金匮要略·呕吐啰下利病脉证治》治疗胃反呕吐的大半夏汤,《伤寒论》治疗心下痞硬,噎气不除的旋覆代赭汤,《医部全录》记载的华佗胃反为病方(雄黄、珍珠、丹砂、朴硝),《本草纲目》治疗噎膈反胃方(硃砂、槟榔)等治疗方药,对现今的临床与实验研究仍有参考价值。

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胃癌患者以手术为主要的治疗方式,但手术创伤可导致胃肠道应激反应,儿茶酚胺增加引起胃肠道黏膜缺血及坏死;手术中长时间暴露肠管,可引起感染等炎症反应;且术后因迷走神经受损、消化道解剖结构改变、胃排空延迟、胃食管抗反流机制被破坏,均可导致术后胃肠道功能障碍^[2-3]。西医主要采用对症治疗,如胃肠减压、服用胃动力药物、止吐药物或胃黏膜保护剂等,对胃肠功能障碍的治疗效果有限。

胃癌患者行胃切除术后出现的肠道功能障碍可归属“肠结”“腹胀”范畴,其病机为正气亏虚、脾胃功能失常、腑气下行所致^[4]。研究显示,胃癌术后的中医证型有多种,常见的有脾胃气虚型、肝胃不和型、胃阴亏虚型、痰瘀互结型、气血两虚型^[5],不同证型患者的治疗方式不同。中医药治疗胃癌术后胃肠功能障碍的方式主要有中药内服、中药灌肠、中药敷贴、耳穴压豆、针灸等^[6]。多项研究证实,早期使用中医药干预,有健脾和胃、益气养血、活血化瘀、解毒散结的功效,而且可以改善营养状况,提高机体免疫功能和生活质量^[7-8]。现将近年来中医药治疗胃癌术后胃肠功能障碍的研究进展进行综述。

1 中药内服

中药方剂成分及作用复杂,有多个作用位点,具有滋补肝肾、活血化瘀、清热解毒等多种综合作用,能有效改善胃癌术后胃肠功能障碍,加速患者康复,提高患者生活质量。常见的中药剂型有汤剂、丸剂、散剂、颗粒剂等。胃癌术后用药规律以扶正祛邪,扶正健脾为主,祛邪药以化痰散结、清热解毒、活血祛瘀多见^[5]。夏秀玲等^[9]对胃癌术后出现气滞血瘀型胃肠功能障碍患者进行研究,加用参黄汤治疗后,观察组患者治疗总有效率高于对照组(96.55% vs 72.41%, $P < 0.05$),且肠鸣音恢复时间、肛门排气时间、腹胀持续时间、进食时间均较对照组显著缩短,中医证候积分降低。参黄汤方剂由生晒参、丹参、厚朴、生大黄、丁香、枳实、吴茱萸等药材组成,生晒参补气健脾,丹参的活血化瘀,生大黄性苦寒,可泻下,厚朴可下气除满,枳实能行气消痞,丁香、吴茱萸具有止呕化浊、散寒止痛之功效,以上诸药联用起益气养脾、祛邪不伤正之功效。邱伟燕等^[10]采用扶正顺气汤治疗老年胃癌术后患者胃肠功能障碍,结果显示,与对照组相比,观察组胃肠功能恢复时间较缩短,腹胀、恶心呕吐等症状评分降低,术后胃肠功能障碍评分(POGD)降低,差异有统计学意义。扶正顺气汤方中有党参、黄芪、西洋参、青皮、当归、丹参、大黄、芒硝、山楂、枳实、陈皮、砂仁、甘草等,其中党参、黄芪、西洋参健脾补气,补益元气;当归补血活血,丹参活血化瘀,青皮和胃降气,山楂行气散结,陈皮健脾和中,砂仁温暖脾胃。徐勇^[11]对胃癌术后胃肠功能障碍患者给予理中汤合六君子汤加减治疗,结果显示观察组肠鸣音恢复时间,肛门首次排气时间及首次排便时间早于对照组。理中汤合六君子汤中有半夏、陈皮、茯苓、白术、人参、干姜、炙甘草等,用水煎服。梁燕凯等^[12]对胃癌术后患者鼻胃空肠营养管滴注人参大黄汤,结果显示胃肠功能障碍评分(GIF),中医证候积分及临床疗效显著优于行常规治疗的对照组。本方使用的人参大黄汤为炮制后的红参和酒大黄,

红参是经过蒸制的人参,可补元益气,酒大黄药性平和,可活血解毒,恢复脾胃之升降。此外,胃癌术后气虚血瘀证患者采用补中益气汤对可以加快胃肠道功能恢复及改善机体营养状况^[13]。众多研究探讨了服用中药对胃癌术后胃肠道障碍的效果,所用的方剂差别较大,可能与患者的证候不同有关,但均较对照组显示出更加显著的临床疗效。

2 中药灌肠

中药灌肠属于中医“导法”之一,早在《伤寒论》中就出现过中药灌肠的记载。对于一部分经口进食困难或不能经口进食者,可通过中药灌肠,药物直接经直肠黏膜吸收,起效快,且操作简单,有助于胃肠减压。谯建等^[14]对胃癌全切术后患者行健脾益气方灌肠治疗,中药处方为黄芪、党参、白术、茯苓、灵芝、陈皮、半夏、厚朴、砂仁,煎煮至100 mL,每周3次保留灌肠,结果显示,灌肠组腹胀腹痛、恶心呕吐评分低于对照组,肠道功能显著改善,且营养状况和生活质量优于对照组。张喜春等^[15]的研究显示,对胃癌根治术后患者给予电针刺激联合复方大承气汤保留灌肠(复方大承气汤150 mL,早晚各1次。厚朴、莱菔子、枳壳、赤芍、芒硝、桃仁、大黄),可以显著缩短术后肛门排气时间、肠鸣音恢复时间及排便恢复时间,且腹胀发生率低于对照组。陈敏捷等^[16]的研究显示,在常规治疗基础上采用小承气汤(大黄、厚朴、枳实、丹皮、赤芍)保留灌肠的治疗组总有效率高于对照组(92.3% vs 82.1%),肠鸣音恢复时间、肛门排气排便时间短,有助于术后胃肠功能恢复。中药灌肠既可避免直接刺激胃肠道,又可以有效保护肠道黏膜,减少肠道炎症递质的释放,促进肠道蠕动,快速恢复胃肠道功能。

3 中药敷贴

内病外治是中医的主要治疗方法之一,“外治之理,即内治之理,外治之药,即内治之药。所异者,法耳。医理药性无二,而法则神奇变幻”充分肯定了外治法的效果。中药外敷或穴位敷贴可通过外敷,使中药经皮肤吸收,刺激相应的穴位而发挥治疗作用。治疗胃癌术后胃肠功能障碍时,常用的中药外敷部位为脐部,由于脐部皮肤较薄,皮下毛细血管丰富,药物更容易进入毛细血管而发挥作用。谢小平等^[17]将理气健脾中药粉剂外敷于胃癌术后患者脐部,出院2周后,中药外敷组患者的症状积分(腹胀、食后饱胀、恶心、暖气、乏力)优于对照组,且血浆胃动素水平高于对照组[(351.73±34.75) pg/mL vs (302.64±20.17) pg/mL],而血浆血管活性肠肽水平低于对照组[(33.56±6.12) pg/mL vs (36.75±5.43) pg/mL],其研究认为中药可经皮肤吸收,然后通过调节胃肠激素分泌而改善术后胃肠动力,促进肠道功能恢复。杜常志等^[18]研究采用中药贴敷神阙穴治疗胃癌术后胃肠功能障碍,术后首次排气时间、排便时间,术后进食流质、半流质时间均较对照组缩短,研究所用中药组方为沉香、胡椒粉、枳实、丁香、丹参、厚朴、吴茱萸、生大黄、人参;神阙穴位于脐部,采用中药贴敷神阙穴治疗,能清降浊、健脾活胃,尽早恢复胃肠道功能。向德尚等^[19]研究中采用参黄散贴敷神阙穴治疗的观察组胃癌术后

患者肠道功能恢复时间、住院时间均短于对照组。除脐部的神阙穴外,足三里、三阴交、内关等穴位敷贴也可用于治疗术后胃肠功能障碍。除神阙穴外,其他穴位敷贴也可治疗胃肠道功能障碍。赵晨光等^[20]将小茴香、吴茱萸、肉桂、丁香、艾叶等粉剂调成糊状后贴敷于足三里、三阴交、内关、上巨虚、下巨虚等穴位,治疗胃癌根治术后患者,术后肠鸣音恢复时间、肛门排气时间及胃管拔除时间等较对照组显著缩短。足三里为胃经主穴,具有生发胃气、燥化脾湿之功效;三阴交为脾经常用腧穴,具有健脾和胃、行气活血之功效;内关为心包经常用腧穴,具有和胃止痛之功效;上巨虚为胃经,具有调肠和胃、通经活络之功效;下巨虚属胃经,为小肠之下合穴,具有调和气血、疏通经络之功效。

4 耳穴压豆

中医认为人体不同的经络都可反应在耳朵的不同位置上,耳穴压豆是将药物贴附于各耳穴,达到疏通经络、调理脏腑的功效。临床上将耳穴压豆用于治疗胃肠道功能障碍取得较好的效果,且操作简单,价格低廉,安全无创。袁大仙等^[21]选取胃穴、脾穴、大肠穴、小肠穴、皮质下穴、交感穴和内分泌等耳穴对胃癌术后患者采用耳穴压豆治疗,治疗有效率显著高于对照组(97.2% vs 80.0%),且肠鸣音恢复时间、开始进食时间、肛门首次排气时间和肛门首次排便时间均短于对照组。史瑞君等^[22]对胃癌术后胃肠功能障碍患者采用耳穴压豆治疗,取内分泌、交感、皮质下、小肠、大肠、脾、胃等耳穴,结果显示,耳穴压豆组上腹胀满症状消失时间、恢复正常进食时间、中医证候积分显著低于对照组,治疗有效率高于对照组(90.90% vs 68.18%)。研究显示,耳穴压豆可以通过调节血清胃动素和P物质水平起到促进肠蠕动、恢复肠道功能的作用^[23]。

5 针灸

针灸,作为中医传统疗法之一,能通过刺激穴位,达到调理脾胃、扶正固本、疏通活络、行气散结的作用,以促进胃肠功能恢复。一项纳入16项随机对照研究的Meta分析显示,针灸可显著缩短胃癌术后患者的首次排气时间[MD=-14.52, 95%CI(-17.31, -11.74)],肠鸣音时间恢复时间[MD=-10.50, 95%CI(-13.99, -7.01)]和首次排便时间[MD=-13.79, 95%CI(-20.09, -7.50)],降低术后恶心呕吐[RR=0.43, 95%CI(0.28, 0.68)]与腹胀[RR=0.41, 95%CI(0.25, 0.68)]的发生率^[7]。但不同针灸方式的效果不同,有电针、艾灸、温针灸等常用于治疗胃肠功能障碍的方式。

康文哲等^[8]对腹腔镜胃癌根治术后患者选取足三里、三阴交及内关三个穴位进行针刺或艾灸,结果显示针刺组和艾灸组患者排气时间为59.41h和59.09h,显著短于对照组的64.72h。郭晋锋等^[24]穴取足三里、上巨虚、下巨虚、公孙、三阴交为主穴针刺治疗胃癌术后残胃排空功能障碍患者,使得患者首次排气时间、拔除胃管时间、恢复进食时间及术后住院天数短。吴晓亮等^[25]选取下肢双侧上巨虚,采用傍针刺法针刺治疗胃癌术后胃肠功能障碍,即上巨虚穴、上

巨虚穴上1寸、上巨虚穴下1寸,以及以上三个位置内侧0.5寸傍针刺,针尖刺向上巨虚方向,结果显示胃癌术后24h内针刺治疗可以缩短术后首次通气时间、首次进食时间,但住院时间未显著缩短,且对腹部肠鸣音的连续波形监测显示,患者的腹部肠鸣音波动在针刺干预后即刻恢复到正常肠蠕动状态,说明针刺治疗可加快胃肠功能的恢复。

6 联合治疗

当单纯中医治疗手段不满意时,可联合两种或多种治疗方式。李晋胜等^[26]的研究显示,与对照组单纯采用针灸足三里、合谷和内关治疗相比,观察组采用针灸联合合大承气汤加味治疗,可显著缩短胃癌术后首次排气排便时间、下床活动时间和住院时间,且可增加血清血清胃泌素和胃动素水平,改善T细胞亚群等免疫功能。石焱等^[27]选择胃癌胃大部切除术发生后胃瘫综合征的患者进行研究发现,采用“老十针”毫针刺联合盐酸甲氧氯普胺注射液穴位注射治疗的观察组肠鸣音恢复时间、腹胀感消失时间、恢复正常饮食时间均优于对照组。张静等^[28]前瞻性选取腹腔镜术后胃肠功能障碍的胃癌患者为研究对象,随机分为普通针刺组、董氏奇穴针刺治疗组,联合组(董氏奇穴联合丁沉扶正汤),联合组患者的中医证候积分低,饮食时间、肠鸣音恢复时间、排气排便时间及下床活动时间短,且血清生长抑素、血管活性肠肽水平低,与其他两组比较差异有统计学意义。

胃肠功能障碍是胃癌术后的常见并发症,临床主要表现为腹痛腹胀、胃肠排空障碍、蠕动减慢等症状。中医治疗可显著改善腹痛腹胀等症状、恢复胃肠蠕动,加速胃肠道康复;还具有整体调节人体免疫和增强人体的神经-体液调节等功能,减少炎症细胞的产生,增加兴奋胃肠的激素产生,如胃动素等;且毒副作用小,安全可靠。

利益冲突 无

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