

# Research Progress of Traditional Chinese Medicine on Wound Healing After Anal Fistula Operation

Yanni Gong<sup>1</sup>, Lili Tang<sup>1</sup>, Jiajun Cheng<sup>1</sup>, Wenzhe Feng<sup>2,\*</sup>

<sup>1</sup>Shaanxi University of Traditional Chinese Medicine, Xianyang, Shaanxi 712046, China

<sup>2</sup>Affiliated Hospital of Shaanxi University of Traditional Chinese Medicine, Xianyang, Shaanxi, 712000, China

\*Corresponding author: szfygck@163.com

**Abstract:** Anal sputum disease, "Surgery Zhengzong" has said that "the husband is dirty with poison, the wine has a strong taste, the hard work, the poisonous and the anus forms a lump", which explains the etiology and pathogenesis of the perianal abscess. Chinese medicine believes that the anus the formation of sputum is caused by perianal abscess that does not heal for a long time. The anus is dominated by the bladder meridian of the full sun. The body's damp and heat residual toxin is injected into the bladder, which eventually causes heat to overcome meat rot. "Lectures on Evil Flesh Forty-two" pointed out: "Evil flesh is also carrion. After carbuncle ulceration, the carrion must be removed first, which means that the old and the new." The existence of the carrion affects the normality of the fresh granulation tissue of the wound. The growth and decaying granulation tissue affects the healing of the wound: Ren Donglin believes that <sup>[2]</sup>, followed by the sequelae of the abscess rupture or incision drainage that occurred around the anorectum, is that the anal canal or rectum communicates with the perianal skin A kind of granulation canal, which often has the risk of sepsis and sepsis, and the conservative treatment effect is not good. AGGARWAL V<sup>[3]</sup> believes that due to the special anal anatomy position, postoperative open trauma, local pollution and Long-term repair is inevitable, so that some patients have slow wound healing and poor healing quality after anal fistula surgery. Synthesis slows down and decomposition speeds up, affecting wound healing. "After anal fistula, the tissue will release inflammatory factors due to trauma stimulation, causing local swelling, compressing blood vessels, and causing local blood to run poorly", which will cause local tissue ischemia and hypoxia, Blood viscosity increases, resulting in insufficient tissue perfusion. Studies such as Jonsson <sup>[34]</sup> found that insufficient tissue perfusion will cause a decrease in the oxygen content and collagen content of the wound, and the perfusion of wound tissue can promote wound healing. Therefore, the long time for wound healing after anal fistula, postoperative infection, postoperative pain and other aspects trouble patients and anorectal clinicians. External treatment of traditional Chinese medicine has a long history of promoting wound healing after anal fistula. There are many treatment methods, and the curative effect is remarkable, which reflects the unique advantages of the external treatment of TCM. The author consulted the relevant literatures in recent years about the external treatment of TCM to promote the healing of wounds after anal fistula. Conduct an overview.

**Keywords:** traditional Chinese medicine, postoperative, anal fistula

## 1. Oral Chinese medicine

Du Weiliang<sup>[35]</sup> Although the wound after anal sputum operation is local, its occurrence, development and changes are closely related to the dysfunction of the viscera. The damp-heat residual toxin after anal fistula surgery is not clear, and the wound does not heal for a long time, the lungs and spleen are insufficient, the qi and blood are insufficient, and most of them are syndromes of the original deficiency and the original. Xiaofa Youtuoli Disinfecting Drink "(Astragalus, Yinhuo, Forsythia, Atractylodes, etc.) can promote blood circulation, improve local microcirculation of wounds, thereby promoting the healing of open wounds after anal fistula; Relieve pain as god soup" (Qinjiao), Fangfeng, peach kernel, cork, etc.) Can significantly reduce postoperative pain and promote wound healing. Yuchuang Decoction (Astragalus, Huai Yam, Fried Atractylodes, Danshen, etc.) through the reasonable compatibility of qi-tonifying and muscle-promoting drugs and anti-toxin drugs to invigorate the spleen, harmonize, and support toxin; 8. "Zhen Chuang Yu Decoction" (Dangshen, Atractylodes, Poria, Astragalus, etc.) has the effects of invigorating qi, invigorating the spleen, nourishing blood and building muscle, and can promote wound healing; Shiquan Dabu Decoction "invigorates both qi and blood, helps yang, strengthens health,

and promotes Wound healing; Yinqi Mixture (Honeysuckle, Astragalus, Paoshanjin, Chuanxiong, etc.) can invigorate qi and detoxify, promote blood circulation and relieve pain, promote wound healing, etc., which reflects the "early invigorating muscle growth without scarring" after anal phlegm surgery. Academic point of view, has a certain role in promoting the repair of wound tissue after anal fistula surgery. Although the incidence of adverse reactions of traditional Chinese medicine injections is relatively high, it still occupies a certain position in the "National Essential Drug List". Under the guidance of the theory of TCM syndrome differentiation and treatment, the scientific and reasonable use of traditional Chinese medicine injection brings convenience to the treatment of patients. For example, Huangqi injection "in the treatment of postoperative patients with anal fistula, the results show that it can significantly shorten the wound healing time and reduce postoperative complications. Occurred; "Danhong injection" after treatment of anal fistula can significantly shorten the wound healing time, reduce anal pain, and subside edema.

## 2. External treatment of Chinese medicine

### 2.1. Chinese medicine fumigation and washing method

Wang Jianxia and Fang Xucheng<sup>[4]</sup> proposed that traditional Chinese medicine fumigation (hu method: fumigation and washing is also known as "collapse stain" in Chinese medicine. The skin can relieve pain and promote wound growth, thereby achieving the purpose of shortening the wound healing time. As early as in the "Fifty-two Prescriptions", it has been recorded before and after anal fistula surgery. Swelling and pain relieving, astringency and muscle growth, removing blood stasis and dispersing knots, removing dampness and killing insects, dispelling wind and relieving itching, decoction and bathing to fumigate the local skin to have the corresponding therapeutic effect. Wang Huimin<sup>[6]</sup> etc. 1 will 60 cases of low anal sputum postoperative patients were randomly divided into two groups. 30 cases in the treatment group were treated with Jinghuang fumigation lotion (Nepeta, Fangfeng, Rhubarb, Glauber's salt, Sophora flavescens, Sichuan bird, grass bird, Sichuan pepper, Chinese gall, Tougu Grass) fumigation and sitz bath treatment, 30 patients in the control group were treated with 1:5000 potassium permanganate solution fumigation and sitz bath treatment. Results The two groups of patients were treated in the postoperative wound exudation period, granulation growth period and epithelial cell growth period. It is better than the control group (P<0.09, the difference is statistically significant. Cai Lanlan<sup>[7]</sup> (90 cases of anal sputum surgery patients were randomly divided into two groups, and the control group 45 cases were treated with conventional western medicine after the operation, Vaseline gauze was given for external application, and 45 patients in the experimental group were treated with Qufushengji Decoction (Cork, Chinese gallnut, Angelica dahurica, Sophora flavescens, pomegranate peel, Glauber's salt, dandelion, angelica, red peony root) fumigation, washing and external application, comparing the two groups of patients The average recovery time, wound recovery and total effective rate of treatment etc. The total effective rate of the control group was 68.89%, and the total effective rate of the observation group was 95.56%. The difference between the groups was statistically significant (P<0.05).

Zheng Chunju and Wang Yehuang<sup>[4]</sup> proposed that the traditional Chinese medicine fumigation (washing) method: first seen in the "Fifty-two Disease Prescriptions", it is called "air ironing" and "washing" in ancient literature. It refers to the use of fumigation and washing. The method uses the power of medicine and heat to directly act on the affected area to achieve the purpose of curing the disease. In addition, the warm stimulation of the drug can speed up the blood circulation around the wound, improve the return of blood, and promote the degrading reaction and exudation of local inflammation. So after anal sputum surgery, bathing and fumigation is beneficial to the absorption of the drug and give full play to its efficacy. At present, the traditional Chinese medicines used in clinical fumigation and washing mainly focus on clearing heat and removing dampness, promoting blood circulation and removing blood stasis, promoting muscles and astringing sores, reducing swelling and relieving pain, many clinical studies such as Yukang lotion" (comfrey, plaster of paris, rhubarb, betel nut, etc.), Cuyu Fumigation and Washing Recipe "(Polygonum cuspidatum, Dandelion, Sophora flavescens, Galla Chinensis, etc.), Rumei External Washing Recipe" (Frankincense, Myrrh, Gardenia, Scutellaria barbata, etc.), Cnidium, Gallnut, etc.), Fumigation and Washing No.1" (Polygonum cuspidatum, Lysimachia, Cork, Alum, etc.), Hemorrhoid Lotion" (Safflower, Frankincense, Myrrh, Gallnut, etc.), Purple Ginseng Mixture, etc., research results It is suggested that the fumigation and washing of traditional Chinese medicine can reach the hospital, clearing the blood stasis and swelling, the swelling and pain disappeared, and the wound healing time after the operation and the pain disappearing time are all effective. Some scholars believe that the wound after anal phlegm operation is more painful, or the old and weak. For long-term tolerance, it is recommended to use wet and hot compress (pour the liquid medicine in the center of the hot and

humid towel, apply the towel directly to the anus, and use a hot water bottle to maintain the temperature for 10-15 minutes) treatment can significantly reduce wound secretions and promote the healing of surgical incisions, Soften scars and protect anal postoperative function

## 2.2. External application of Chinese medicine mixed with medicine

Wang Jianxia and Fang Xucheng<sup>[4]</sup> proposed that the external application of traditional Chinese medicine, "Surgery Dacheng", proposed a method of external application of traditional Chinese medicine for the treatment of diseases, "wherever the thread is used... The external application of traditional Chinese medicine is powder, ointment, etc., and it is applied to the wound surface of the patient. It is a way of external application of traditional Chinese medicine, which has the effects of reducing swelling and pain, removing blood stasis and regenerating, invigorating blood and stopping bleeding. Sheng Yin<sup>[9]</sup> Pu randomly divided 90 patients with simple anal fistula into a control group and an observation group with 45 cases each. , Phellodendron, Scutellaria, Dragon's Blood, Rhubarb, etc.). The pain, exudation disappearance time and wound healing time of the two groups after treatment were counted. The difference was statistically significant ( $P<0.05$ ); Shi Li<sup>[10]</sup> et al. (120 cases Patients with anal fistula surgery were randomly divided into a treatment group and a control group, each with 60 cases. The wound dressing of the treatment group was externally applied with Yuebaisan (borax calcined plaster, borneol), and the control group was externally applied with Baikerei gauze. Results The treatment group was better than the control group in terms of wound area, wound discharge, wound bleeding, wound pain, etc. ( $P<0.05$ ) Wu Zhaoqing<sup>[11]</sup> et al. randomly divided 100 patients with anal fistula into a treatment group and a control group The treatment group was changed with compound Zidanshengji ointment, and the control group was changed with petroleum jelly gauze. The result: the cure rate of the treatment group was 70%, and the total effective rate was 100%, which was significantly higher than the cure rate of the control group. %, the total effective rate was 84% ( $P<0.05$ ). The average cure time of the treatment group was  $(26.38 \pm 3.14$  d), which was significantly shorter than that of the control group ( $33.38 \pm 9.73$  d ( $P<0.0s$ ), the difference was statistically significant ( $P<0.05$ ). Kong Jie<sup>[12]</sup> divided 60 cases of postoperative anal fistula into a control group and an observation group by a random number table. 30 cases in the observation group received scutellaria ointment gauze strips for dressing, and 30 cases in the control group received petrolatum gauze strips. After dressing change, the results showed that the therapeutic effect of postoperative anal pain, wound edge edema, and secretion in the observation group were better than those in the control group, and the difference between the two groups was statistically significant ( $P<0.05$ ).

Zheng Chunju and Wang Yehuang<sup>[5]</sup> (2014) were first seen in "Waitai Secret Yao". The admixture is called powder in ancient times, and is now called powder. The admixture can be blended on plasters, ointments, or directly blended on the sore surface, or Adhere to the paper twist and then insert it into the sore, or puff the medicine on the lesion. It mainly has the effects of promoting blood circulation and removing blood stasis, anti-inflammatory and pain relief, astringent and hemostasis, and muscle growth and soreness. Etc. promote wound healing and reduce postoperative scar formation; Yuebaisan<sup>[13]</sup> observed that Yuebaisan (6 parts of calcined plaster, 1 part of borneol) overall curative effect and wound healing time were better than those of the control group; Compound Ganshi Chuangyu San (Ganshi Chuangyu San) Stone, dragon's blood, frankincense, comfrey, etc.) have a strong killing effect on the bacteria on the wound, which can significantly reduce the inflammatory reaction of the wound, reduce the exudation of the wound, and promote the growth of granulation; compound pearl powder (pearl powder, borneol, furnace Ganshi, Dragon's Blood, etc.) can alleviate the pain of patients and shorten the wound healing time; Jinxuan Hemorrhoids Fumigation and Washing Powder (Xuanming powder, horse tooth fan, honeysuckle, dry alum, etc.) can improve local blood circulation and promote wound healing; hemorrhoids Ningsan (Haikunqian, Kuji, Borneol) can reduce wound pain by reducing wound inflammation and reducing the release of inflammatory mediators, and has a promoting effect on all stages of myogenesis and skin restoration, and accelerates the healing process of anal fistula incisions; "Shengji San" (calamine, milkstone, talc, borneol, etc.) can promote wound healing and shorten the healing time.

Li Chunsheng<sup>[14]</sup> et al. randomly divided 280 patients with anal sputum surgery into 2 groups. 140 cases in the treatment group were treated with Jiu Hua ointment plus or minus external application; 140 cases in the control group were treated with traditional petrolatum gauze external application. Results: The wound healing time and speed of the treatment group were significantly better than those of the control group ( $P<0.05$ ). Lu Dan<sup>[15]</sup> et al. divided 60 cases of postoperative anal fistula into 2 groups randomly. 30 cases in the treatment group were treated with external application of Qiyu ointment gauze strips; 30 cases in the control group were treated with artificial healing membrane gauze strips. Results:

treatment group on the 7th and 14th day after operation, the wound area was significantly smaller than that of the control group ( $P<0.05$ ), and the wound healing rate was significantly higher than that of the control group ( $P<0.05$ ). Qian Yingming randomly divided 68 patients with anal sputum into 2 groups. Treatment group 36 cases were treated with anal sputum resection combined with external application of traditional Chinese medicine (Hongshengdan for anti-inflammatory and pain relief phase, Huafusan for rot and muscle growth phase, and Shengjisan for healing phase); 32 cases in the control group were treated with simple anal fistula resection. Results: The total effective rate of the treatment group is 97.2%, and the total effective rate of the control group is 81.3%. The treatment group has better curative effect than the control group ( $P<0.05$ ), and the pain time and healing time of the treatment group are also significantly shorter than the control group ( $P<0.05$ ). Mao Xiyun<sup>[16]</sup> et al. randomly divided 50 cases of postoperative anal fistula into 2 groups, 25 cases of treatment group were treated with Baijiesan wound external application, and 25 cases of control group were treated with Beifuji wound spray treatment. Results: Wound healing time in the treatment group It was significantly shorter than the control group ( $P<0.05$ ), and the wound healing rate was significantly higher than that of the control group ( $P<0.05$ ). Han Ye<sup>[17]</sup> and others randomly divided 120 patients with low anal fistula resection into 2 groups. Treatment group 60 Cases were treated with self-made wet compresses for external application (drug composition: gallnut, sophora flavescens, angelica, Kochia scoparia, cork): the control group was treated with 50% magnesium sulfate solution for external application. Results: postoperative pain, itching, and anal edema in the treatment group and the occurrence of anal bulging was significantly less than that of the control group ( $P<0.05$ ).

### 3. Chinese medicine flushing method

Luo Xiaoxi<sup>[18]</sup> proposed that the Chinese medicine flushing method is a method of using a syringe or other medical equipment to extract the traditional Chinese medicine liquid and flush it into the lumen after anal sputum surgery. This method can effectively remove the deep part of the lumen after anal sputum surgery. The secretions and pus rot substances, and make the liquid medicine fully contact the wound surface, which is more conducive to the cleaning and healing of the wound surface after the operation. The wound cavity after anal sputum surgery is generally deep and wide, especially for high-level complex anal sputum surgery. The wound is more complicated. Pure cotton wool or other dressing changes cannot completely clean the postoperative wound, and it is easy to cause pain or even pain on the patient's wound when changing the dressing. Times injury. Traditional Chinese medicine washing can fully contact the wound surface, remove the pus and rot in the wound cavity, and has less trauma. The patient's acceptance is high, and it has gradually become an important therapy for external treatment of Chinese medicine.

Wang Meiqin<sup>[19]</sup> proposed that 60 patients with high simple anal sputum surgery were randomly divided into 2 groups. Thirty patients in the treatment group were rinsed with Kushen Decoction (drug composition: Sophora flavescens, scutellaria, Baiji, Corydalis, dandelion, cat's claw, fangchi); 30 patients in the control group were rinsed with 0.9% sodium chloride injection to rinse their sputum tubes. Results: There was no significant difference in the treatment effect between the two groups ( $P>0.05$ ), but the treatment group was better than the control group in reducing postoperative pain and shortening the healing time ( $P<0.05$ ). Kong Shujuan<sup>[20]</sup> et al. proposed that 56 patients after anal sputum tunnel dragging were randomly divided into 2 groups. 26 cases in the treatment group were treated with yuxing herbal liquid washing combined with sandbag compression treatment, and 30 cases in the control group were treated with routine 0.9% sodium chloride injection to wash the sputum tube and wound surface. Results: The number of days of treatment in the treatment group was significantly less than that in the control group ( $P<0.05$ ), and the recurrence rate of postoperative healing was significantly lower than that in the control group ( $P<0.05$ ). Chen Huifang<sup>[21]</sup> randomly divided 92 patients after anal sputum dragging into 2 groups. 46 cases in the treatment group were treated with traditional Chinese medicine liquid (medicine composition including cork, sophora flavescens, atractylodes root, white peony root, Weilingxian, white peony root, alum, mirabilite, licorice), 46 cases in the control group were treated with 0.9% sodium chloride injection Rinse treatment. Results: The treatment group was better than the control group in terms of postoperative pain and postoperative wound healing ( $P<0.05$ ).

### 4. Medicine thread hanging method

The traditional Chinese medicine thread hanging method is generally suitable for high anal fistula. The silk thread or cotton thread is soaked in the traditional Chinese medicine liquid, and the traditional

Chinese medicine thread is made through the operation process of soaking, steaming, and applying medicine. After the operation, the prepared traditional Chinese medicine thread is hung in the main lumen and branch lumen of anal fistula, in order to achieve the purpose of smooth drainage and cutting the lumen<sup>11-22</sup>, the drug thread hanging method has an important role in the treatment of anal fistula. The drug thread hanging can not only improve the treatment effect, but also it can also achieve the purpose of protecting anal tissues and functions. As early as in the "Encyclopedia of Medicine in Ancient and Modern Medicine", there is a record of the use of medicine thread to treat dysfunction. "The thread is used outside the intestines, and the lead is suspended by a plumb. Replenishment, water flowed line by line, no drag hole was penetrated, and goose tube disappeared. Wang Kaiping<sup>[22]</sup> et al. randomly divided 40 patients with high pure anal fistula into 2 groups. Treatment Jieyu Shengji San traditional Chinese medicine thread-drawing therapy (drug composition: calamine, hot gypsum, red stone fat, cinnabar, angelica, angelica, dragon's blood, comfrey); the control group received ordinary silk thread-drawing treatment. The results showed that the pain disappearance time, edema disappearance time and wound healing time in the treatment group were shorter than those in the control group ( $P < 0.05$ ). Xu Ran<sup>[23]</sup> randomly divided 57 patients with high complex anal fistula postoperatively into 2 groups, and 30 patients in the treatment group were treated with traditional Chinese medicine line to mouth drainage (drug composition: rhubarb, phellodendron, coptis, croton, sanguis, dragon's blood, E flower, euphorbia, kansui, fenfeng, honeysuckle, forsythia); the control group received conventional thread drainage. Results: There was no significant difference in the cure rate and postoperative recovery rate between the two groups ( $P > 0.05$ ), but the treatment group was in terms of anal shape, anal function, postoperative pain, postoperative urination disorder, wound secretions and wound healing time. All were better than the control group ( $P < 0.05$ ). Yang Yun et al.<sup>[24]</sup> randomly divided 60 patients with complex anal fistula into 2 groups, and 30 patients in the treatment group were treated with Qianjin Powder plus or minus drug line pair-to-mouth drainage method (drug composition: Rhubarb, Phellodendron amurense, Rhizoma Sanguis, Dragon's Blood, Wu Flower, Euphorbia, Kansui, Fangfeng, Forsythia, Myrrh, Frankincense, Mituo monk) treatment; 30 cases in the control group were treated with incision and exclusion. Results: The total effective rate of the treatment group was 80.00%, the recurrence rate was 3.59%, the total effective rate of the control group was 53.33%, and the recurrence rate was 7.61%. The total effective rate of the treatment group was higher than that of the control group ( $P < 0.05$ ), and the recurrence rate was lower than that of the control group ( $P < 0.05$ ).

Zhao Yongjiao proposed that<sup>[25]</sup> medicinal thread therapy is one of the most distinctive traditional external treatment methods in Chinese medicine surgery. The method usually involves inserting medicinal threads into sinus tracts and ulcers, with the aid of the pus-removing effect of the medicine and the linear shape of the medicinal threads. , Make the necrotic tissue adhere to the medicine thread and drain out, to achieve the effect of turbidity drainage. Modern incision healing theory advocates that the wound surface maintains a moist environment that is conducive to healing, which not only regulates local oxygen tension and angiogenesis, promotes enzymes and water required for tissue dissolution, but also helps maintain cell viability, release growth factors, and stimulate fibroblasts. The growth of endothelial cells and the promotion of keratinocyte proliferation" are also conducive to host phagocytes mediated by polymorphonuclear leukocytes to perform their functions, reduce the infection rate, and facilitate wound healing.

Yang Yun<sup>[24]</sup> et al. divided 60 patients with complex anal fistula into a treatment group and a control group. The treatment group used traditional Chinese medicine thread-to-mouth drainage method, and the control group used incision combined with thread-hanging method. Conclusion Traditional Chinese medicine thread-to-mouth drainage method Treatment of complex anal fistula can effectively reduce wound secretions, promote healing, reduce anal function damage, and shorten the course of the disease.

## 5. Acupuncture and cupping therapy

Feng Wenzhe proposed that<sup>[26]</sup> acupuncture and cupping therapy are traditional Chinese medicine treatment methods. They are used to stimulate the various acupoints to achieve the purpose of strengthening the body and removing the evil and dredging the meridians. They have achieved significant effects in various medical fields, especially in analgesia. The effect is definite. Li Dandan proposed that<sup>[27]</sup> both acupuncture and cupping therapy have the effects of regulating qi and blood and dredging the meridians. Acupuncture can effectively regulate the anal sphincter, relieve muscle tension, promote local blood circulation, and relieve postoperative pain and edema by stimulating local meridians., To promote postoperative wound recovery. Cupping has the same effect on anal sputum surgery. Studies have shown that cupping has the effects of regulating the nervous system, improving microcirculation, improving immunity, relieving pain, repairing damage, and improving skin physiological functions. Sun Yanhui<sup>[28]</sup>

et al. randomly divided 90 patients with postoperative anal fistula into 3 groups. 30 cases in the mild moxibustion treatment group were treated with potassium permanganate solution and then treated with mild moxibustion on the wound and Changqiang acupoint for 30 min; 30 cases in the microwave group were treated with potassium permanganate solution and then microwaved on the wound and Changqiang acupoint 30 min; 30 cases in the control group were simply fumigated and washed with potassium permanganate solution. Results: Compared with the microwave group and the control group, the mild moxibustion group had the most significant improvement in wound healing time, wound healing rate and pain score ( $P < 0.05$ ). Zhao Wenshu<sup>[29]</sup> et al. randomly divided 120 patients with postoperative anal fistula into 2 groups. 60 cases in the treatment group were treated with cupping on the basis of conventional dressing change; 60 cases in the control group were treated with conventional dressing change. Select Dumai Yaoshu, Dazhui, Mingmen, and Zutaiyang Bladder Meridian Pishu and Shenshu points, cupping for 15 minutes, twice a day, from the beginning of admission to the end of discharge. Results: The treatment group was better than the control group in shortening wound healing time, reducing anal pain, reducing wound exudation, and improving anal swelling ( $P < 0.05$ ).

As early as the pre-Qin period, the "A and B Classic of Acupuncture and Moxibustion" has recorded "attributes: hemorrhoid pain, Zhuzhuzhu. Hemorrhoids, perineum.", "The Experience of Sore and Ulcers" contains "treatment of (sore) must To replenish the inside with warming and tonic medicines, and to replenish the outside with medicines that grow muscles." That is to fully realize the importance of tonic for the treatment. Gentle moxibustion can warm the yang and invigorate the deficiency, but also warm the meridian and dredge the collaterals. With its warming effect, drug effect and regulating effect on the whole body through the meridian, it is especially suitable for the repair of postoperative wounds. Wang Yukai and Yang Xiuying<sup>[30]</sup> treated mild moxibustion for patients with low simple anal fistula after surgery. The results showed that the wound healing rate in the mild moxibustion group was significantly improved and the healing time was shortened. The treatment group was better than the control group in terms of postoperative pain and edema. Dong Qingjun<sup>[31]</sup> proposed that animal experimental studies have also confirmed that in the early and middle stages of wound repair, gentle moxibustion can increase the content of fibroblasts, macrophages, type I and type III collagen, and increase the ratio of type I and type III collagen: In the later stage of wound repair, mild moxibustion can reduce the content of fibroblasts, macrophages, type I collagen, and type III collagen on the wound.

## 6. Combination therapy

Anal fistula, especially complex anal sputum, has severe clinical manifestations and many complications, and it is difficult to alleviate postoperative symptoms. A single treatment method may not achieve effective treatment purposes. Clinically, multiple treatments can be combined. Pan Yong et al. (2014)<sup>[32]</sup> randomly divided 70 postoperative patients with anal fistula into 2 groups. 40 cases in the treatment group were fumigated and washed with dehumidification and activating blood decoction (drug composition: Sophora flavescens, Phellodendron amurense, Ma Tefan, Danshen, Borneol) combined with acupuncture (Changqiang acupoint for body acupoints, 1 line on top of head acupoints, size 28 and 2 inches) The filiform needle was inserted 1.5 inches with both hands, and the patient felt swelling, pain and discomfort. The needle was retained at Changqiang acupoint for 30 minutes, and the needle at the top side was retained for 1 hour) for treatment; 30 patients in the control group were treated with potassium permanganate bath. Results: The total effective rate of the treatment group was 100%, and the total effective rate of the control group was 86.7%. The curative effect of the treatment group was better than that of the control group ( $P < 0.05$ ), and the wound healing time of the treatment group was significantly shorter than that of the control group ( $P < 0.05$ ). Zhang Dongliang<sup>[33]</sup> (2016) randomly divided 80 patients with postoperative anal fistula into 2 groups. Forty patients in the treatment group were given traditional Chinese medicine and medicine sitz bath (Chinese medicine sitz bath No. 1 sitz bath was used within 5-7 days after operation, and Chinese medicine sitz bath No. 2 was used after 5-7 days. Chinese medicine sitz bath No. 1 was mainly used. Composition: Coptis, Houttuynia, wild chrysanthemum, Pulsatilla, Xu Changqing, raw rhubarb, etc. The main components of the Chinese medicine seat bath No. 2 prescription: Houttuynia, Coptis, Phellodendron, Sophora flavescens, wild chrysanthemum, Pulsatilla, etc.) and Shengji San, Huanglianyin was treated with external application of triple therapy; 40 cases in the control group were treated with potassium permanganate solution in bath. The results showed that the total effective rate of the treatment group was 97.5%, and the total effective rate of the control group was 87.5%. The treatment group was better than the control group ( $P < 0.05$ ), and the treatment group had postoperative wound healing time, hospital stay, wound pain, edema, and edema. Difficulty defecation, bleeding, exudation and granulation status were better than those of the control group ( $P < 0.05$ ). Li Haiyan (2016)<sup>[36]</sup> randomly divided 80 patients with anal fistula into 2 groups.

40 cases in the treatment group were fumigated and washed with kushen decoction (medicine composition: scutellaria, phellodendron, flavescens, rhubarb, dandelion, violet, panax notoginseng, borneol, red peony) combined with infrared wound radiation treatment; 40 cases in the control group were treated with high manganese fumigation and washing treatment with potassium acid solution. Results: The total effective rate of the treatment group was 92.5%, and the total effective rate of the control group was 77.5%. The treatment group was better than the control group ( $P < 0.05$ ), and the treatment group had excellent postoperative pain score, exudate score and wound healing time. In the control group ( $P < 0.05$ ).

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About the author: Gong Yanni female 1995 Master's degree candidate, research direction is basic and clinical research on anorectal diseases of traditional Chinese medicine

Contact: 18992033545

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