

Staged Treatment of Ulcerative Colitis

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Abstract: Ulcerative colitis (UC) is a chronic inflammatory lesion caused by various factors in the mucosa and submucosa of the intestine. The treatment of UC is difficult due to its unstable condition, long course and difficult to cure, and even induces cancer. In this paper, we will focus on three periods of UC, the initial phase (mild and moderate), the active phase and the remission phase, and explore the core pathogenesis of different stages of UC disease development from the perspective of traditional medicine, in order to provide new diagnostic and therapeutic thinking for the clinical treatment of UC by combining Chinese and Western medicine.

Keywords: Ulcerative colitis, Pathogenesis, Staging, Treatment

1. Introduction

Ulcerative colitis (UC) is a common clinical chronic inflammatory bowel disease with lesions involving the mucosa and submucosa of the rectum and colon, mostly in a continuous diffuse distribution, with clinical manifestations of abdominal pain, diarrhea, and mucopurulent stools^[1]. According to studies, the incidence of this disease is at a stable level or even decreasing in developed countries in Europe and the United States, but in China there is a trend of increasing year by year, which may be related to social progress and changes in lifestyle in recent years^[2]. The pathogenesis of the disease has not been grasped yet, and many scholars are still in continuous research and exploration. The disease has a prolonged course and a low cure rate, which is very likely to cause patients' bad mood, reduce their quality of life and increase their economic burden. Non-surgical treatment in modern medicine includes Aminosalicylic acid, immunosuppressant, biological agents and other drugs for related treatment, but the aforementioned drugs have deficiencies such as high economic costs, more toxic side effects, and sapping the patient's morale after long-term administration^[3].

In recent years, the essence of TCM theory has been continuously inherited, innovated and perfected, and the characteristic treatment modalities of TCM have gradually become clinically significant, and with the advancement of modern technology, the principle of TCM evidence-based treatment and clinical trials have been skillfully combined, confirming the subtlety of traditional medicine and the scientific nature of treatment methods. Relevant studies have shown that clinicians treating UC patients in the chronic stage using a combination of Chinese and Western medicine can effectively improve and alleviate the progression of the disease, reduce the occurrence of adverse reactions, bring some confidence and hope to patients, prolong their lives and improve their sense of well-being, but few have used different periods of UC to explore its main pathogenesis. In this paper, we will discuss its etiology and pathogenesis in traditional medicine from this point, and provide relevant theoretical basis for improving the diagnosis and treatment techniques in the future.

2. Staging of UC

Professor Yansheng Zhang divided UC into the initial stage, canker-forming stage, and post-ulcerative stage. The initial stage is due to feeling the evil and epidemic toxin, weakness of the spleen and stomach, stagnation of qi and blood, this stage is mostly seen in the beginning of UC light and moderate; the stage of carbuncle is caused by dampness and heat, stasis and heat, stagnation of blood circulation as the main cause, this stage corresponds to the active stage of UC. Prof. Zhang Yansheng believes that the evil Qi in the later stage of ulceration is gradually receding, at this time, spleen and kidney deficiency is the main cause, and this stage corresponds to the remission stage of UC^[4,5].

3. Initial stage of UC (mild to moderate)

3.1. *Spleen and stomach weakness is the basis of UC pathogenesis*

In Chinese medicine belongs to ' long dysentery ', ' diarrhea ', ' intestinal ', ' Chiwo ' and other disease. The book "Jing Yue Quan Shu" says that "the origin of diarrhea is due to the spleen and stomach" and "Jing Yue Quan Shu " mentions that "the disease is in the lowermost part of the wide intestine, but the origin of the disease is not in the wide intestine but in the spleen and kidney". Zhang Jingyue believes that the origin of UC is the spleen and stomach, and the location of the disease is in the large intestine. In " spleen and stomach theory ", "If the essence of stomach qi is weak, and the diet is doubled, the spleen and stomach qi is not only injured, and the vitality cannot be filled, and the disease from the birth." Li Dongyuan believes that the impaired function of the spleen and stomach will trigger the occurrence of other internal organ diseases. The spleen, stomach and intestines are damaged due to various pathogenic factors such as exogenous summer dampness epidemic toxin, fat and sweet taste, abnormal innate endowment and poor emotion. If the spleen and stomach are damaged, the spleen and stomach will lose the power to raise the clear and lower the turbidity, and lose the power to transport the water and grain essence and stagnate the water and dampness, resulting in diarrhea; the spleen and stomach will produce qi and blood, which will command the rise and fall of qi, and if the qi is not smooth, the blood will overflow outside the veins and cause blood in the stool. For a long time, the dampness and heat stagnate in the intestine and fight with the intestinal qi and blood, causing dysentery due to damage to the intestinal membrane and blood circulation. Combined with their own practical experience, clinicians have different views on the etiology and pathogenesis of UC. Professor Li Dexin believes that ' soil is the mother of all things ', the spleen and stomach transports the fine substance of water and grain to the whole body, and nourishes other viscera. If the spleen and stomach are damaged, it will affect the normal function of other viscera. The deficiency of vital qi and the invasion of external evils will cause new diseases^[6]. Professor Li Junxiang^[7] said spleen and stomach weakness is the pathogenesis of this period, damp heat turbidity toxin stasis intestinal as the standard, but the spleen deficiency and dampness throughout the course of the disease. Professor Xie Jingri^[8] believed that deficiency of the spleen and stomach is the underlying cause of the disease, and treatment suggests that a light diet and an open mind in active patients can slow down the progression of the disease. Therefore, the focus of treatment in this stage is to mediate the function of the spleen and stomach, with the removal of damp-heat as the goal.

3.2. *Invigorating spleen and tonifying Qi*

To sum up, to benefit the qi and strengthen the spleen, restore the spleen and stomach to transport and transform and the spleen's ascending and clearing functions is the primary treatment in this period. Clinically, we should tonify the spleen and stomach, so that the spleen is healthy, the spleen can be transported and transformed, and the qi in the middle warmer can rise and fall as normal. Yin Ping^[9] et al. treated 120 patients with UC with mesalazine combined with Shenling Baizhu powder and mesalazine respectively, and found that the former could reduce the inflammatory response with fewer adverse effects, and the remission rate and total effective rate and recurrence rate of cured UC were clearly and better than the mesalazine group. Li Chang^[10] et al. used 40 patients with ulcerative colitis with spleen deficiency and dampness as observation subjects and gave acupuncture combined with Si Jun Zi Decoction plus reduction, and their total effective rate of treatment reached 95.0%, which was better than the acupuncture group and the Chinese medicine group. Yin Taohua^[11] used Si Jun Zi Decoction plus reduction to treat 70 patients with UC, and the total effective rate of treatment reached 94.55%, which could effectively reduce clinical symptoms such as abdominal pain, diarrhea, and pus and blood stools. In summary, clinical studies in Chinese medicine have shown that the method of strengthening the spleen and benefiting qi is effective in patients with spleen deficiency and dampness type UC, which can down-regulate inflammatory factors, reduce the infiltration of inflammatory factors, promote the repair of intestinal mucosal damage, effectively improve intestinal function, and improve patients' clinical symptoms with good drug resistance and high safety, and can be used as long-term maintenance treatment.

4. The activity period of UC

4.1. *Damp heat and stagnation are central to the promotion of UC development*

The spleen and stomach is weak, must produce phlegm dampness, heat for a long time, the dampness and heat of the evil qi stagnates in the large intestine, the intestines qi and blood stagnation, do not pass the pain, see abdominal pain urgent refusal to press, after the pain reduction and other symptoms. Sao Ye Zhuang medical case said: "Damp heat inside the air suffocation, for abdominal distension pain." Shen's Zun Sheng book that: "Most of the roots of dysentery, all by wet steam heat congestion." This shows that in the active stage of UC, the cause of the disease is mainly "damp-heat". The Yang Ming meridian is full of qi and blood, dampness and heat constantly invade the intestines and bowels, damaging Yang Ming qi and blood, turbid toxin evil qi transforms from qi to blood, and qi and blood fight each other. The intestinal qi is blocked, and the intestinal tract is fumigated and burned. Long-term illness will lead to deficiency and blood stasis, blood stasis will lead to intestinal collaterals, corruption and pus, and blood will overflow without following the meridians. Abdominal pain, unpleasant stool and mucus pus and blood stool can occur in the large intestine. Tang Rongchuan mentioned in the ' blood syndrome theory ' that ' what is the root of blood loss, blood stasis is its root, so any recurrence, which is more than blood stasis ', indicating that blood loss and blood stasis interact with each other, blood stasis does not go, new blood does not produce, the source of qi and blood can not be filled with healthy qi, and the intestine is not nourished, so the disease is lingering and difficult to cure. Professor Pan Jinhui^[12] believes that damp-heat pouring down and endogenous turbidity are the main causes of active ulcerative colitis. The clinical treatment is mainly based on clearing heat and detoxification, removing dampness and relieving pain, and the effect is obvious. Lou Yingying^[13] put forward the theory of ' turbidity toxin pathogenesis '. The evolution process is damp-heat → phlegm turbidity → blood stasis → turbidity toxin, which are stagnated in the intestines and are the main causes of ulcerative colitis. Professor Shen Hong^[14] proposed that damp-heat-induced blood stasis and blood stasis-heat injury are the main causes of pus and blood stool. The treatment of clearing heat and removing dampness combined with cooling blood and removing blood stasis can alleviate the clinical symptoms of moderate active UC and improve the confidence of patients, especially in improving pus and blood stool. Therefore, in the active phase of UC, dampness and heat causing blood stasis, blood stasis and heat is the main cause of UC incidence of this stage.

4.2. *Accumulation stagnation, loss of its surplus*

Ren Zhai Zhi Zhi Fang said: ' Dysentery out of stagnation ', stagnation is the main real evil, including damp heat, heat toxin, blood stasis, qi stagnation and other pathological products. During this period, the main clinical manifestations were abdominal pain, tenesmus, bloody purulent stool, anal burning and so on. The clinical treatment followed the principle of ' treating the symptoms in emergency ', and the first was the accumulation of stagnation. Li Min^[15] by observing the large intestine damp-heat syndrome in patients with UC, be Baitou Weng Tang enema combined with mesalazine treatment, can achieve the effect of clearing heat and detoxification cooling blood, increase the number of intestinal flora, reduce the number of pathogens. Zhao Lun^[16] confirmed through a clinical study that the oral administration of the formula for clearing heat and dampness and activating blood together with herbal enemas could significantly reduce the levels of ICAM-1 and VCAM-1 in patients with UC, alleviate intestinal mucosal damage, and improve immune function with high safety and few adverse effects. All of the above indicate that this period of clearing damp-heat as the main method to eliminate the actual evil can effectively reduce the clinical symptoms of patients, improve the clinical efficacy and reduce the degree of disease activity.

5. The remission period of UC

5.1. *Spleen and kidney yang deficiency is the source of recurrence of UC*

The kidney is the congenital foundation, and the spleen is the acquired foundation. The transportation and transformation of water and grain essence and water dampness by the spleen and stomach requires the warmth of kidney yang. The essence hidden in the kidney depends on the nourishment of qi and blood generated by spleen yang. Long-term spleen and kidney disease, gas consumption injury Yang, resulting in kidney Yang deficiency can not warm the spleen Yang, or spleen Yang deficiency can not fill the kidney Yang, the body without anti-evil, and finally cause the spleen

and kidney Yang deficiency, that is, the day in the physiological and pathological mutual breeding. ' Medical Solution ' recorded: ' Long diarrhea are caused by kidney fire failure, can not blame the spleen and stomach '. 'Yizong must read ' said: ' It is known that the disease is shallow in the spleen and deep in the kidney. Kidney is the stomach, orifices in the two Yin, no long dysentery and kidney damage. If kidney yang deficiency, Mingmen fire failure, fire does not warm the soil is spleen yang deficiency; if the spleen and stomach disorders, Qi, blood, body fluid metabolism, consumption of gas damage Yang, long-term and kidney, and ultimately lead to spleen and kidney Yang deficiency, so see long diarrhea, with frozen or bloody stools, cold limbs, cold abdominal pain hidden, there is loose stool, complete grain does not even diarrhea spleen and kidney Yang deficiency syndrome. Professor Zhou Bin^[17] believes that spleen and kidney deficiency is the origin of ulcerative colitis in remission stage and the source of recurrence. He adheres to the principle of simultaneous treatment of spleen and kidney, and establishes the treatment idea of simultaneous treatment of spleen and kidney and simultaneous regulation of qi and blood. Professor Baiguang^[18] believes that yang qi is the foundation of maintaining human life. The remission period of UC is prolonged, the condition is lingering and difficult to heal, the spleen and stomach are damaged, the spleen yang is weak, the transportation and transformation are disordered, and the dampness qi accumulates in the middle energizer for a long time. It extends to the kidney, the kidney yang deficiency, the spleen qi loses the warmth of the kidney yang, and the air flow of body fluid dampness and turbidity walks between the intestines. The spleen and kidney yang deficiency is the root of the disease. In the treatment, the method of supporting yang is the main method, and the regulation of spleen and kidney yang qi is taken care of. The above shows that the spleen and kidney deficiency, lack of righteousness, can not fight the attack of external evils and pathogenic, so that the disease repeated, protracted refractory. Therefore, spleen and kidney yang deficiency is the main cause of remission of UC, in the treatment of this period should pay attention to regulating spleen and kidney.

5.2. Warming the kidneys, strengthening the spleen, and supporting the root

Warming the kidneys and strengthening the spleen is the basic treatment for UC in remission, and significant results have been achieved in the clinical treatment of TCM. Related studies have shown^[19] that the method of warming the kidney and spleen can promote the healing of intestinal mucosa, regulate the immune function of the body, and inhibit the excessive activity of pro-inflammatory factors, and the method of warming the kidney and spleen is widely used in clinical practice. Lu Zhuxia^[20] selected dialectical for spleen and kidney yang deficiency type UC patients to be treated with oral Sishen Pill and Shenling Baizhu Powder combined with mesalazine suppository, the study showed that this prescription can effectively improve the TCM syndrome, less adverse reactions, regulate immune function, delay the progression of disease activity. Xi Lanlan^[21] used 70 patients with spleen-kidney yang deficiency type UC as observation subjects and gave tonic yang anti-diarrheal soup plus reduction combined with mesalazine and found that this formula was clearly effective and better than the mesalazine group in improving the symptoms of diarrhea, abdominal pain, urgency and mucous-purulent-blood stools, and controlling the activity of the disease and reducing its recurrence rate. A series of clinical studies have demonstrated the efficacy of warming the kidney and warming the spleen in combination with western medicine in the treatment of ulcerative colitis during the remission period of UC, which can improve the efficiency of treatment and reduce the recurrence rate of the disease, and protect the intestinal mucosa by regulating the immune balance and reducing the expression of intestinal inflammatory factors.

6. Conclusions

In recent years, studies have shown that the prevalence of UC is increasing worldwide, and is classified as a common and difficult disease of the digestive system, which is difficult to cure and prone to recurrent attacks. This article discusses the etiology and mechanism of ulcerative colitis in different periods from the perspective of traditional medicine and modern medicine, combined with colonoscopy. Traditional Chinese medicine combined with syndrome differentiation and treatment believes that in the early stage of ulcerative colitis, it is mild and moderate, with the main cause of spleen and stomach weakness, and dampness is the main pathogenic factor. In the active stage, dampness and heat are the main causes, and qi and blood stasis are the pathological factors. In the severe stage of active stage, dampness and heat cause stasis, and stasis and heat are the main causes. Western medicine mainly has the etiology of intestinal flora dysbiosis, imbalance of immune function regulation, abnormal coagulation function, and over-activated inflammatory response. However, the

Western medical mechanism of UC is still unclear and in its embryonic stage, and many scholars are needed to further investigate the mechanism of the disease, which is expected to provide more objective basis for the pathogenesis, etiology and possible treatment of UC and improve the efficiency of diagnosis and treatment.

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