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Clinical Application of Chai Shao Liu Jun Zi Tang in the Treatment of Digestive System Diseases

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Abstract: Chai Shao Liu Jun Zi Tang is mainly a combination of Liu Jun Zi Tang and Si Wei San formula. The original formula has the effects of strengthening the spleen and dispelling wind. Due to the deepening of clinical practice, the scope of application has been expanded and the therapeutic effects are outstanding. To make better use of this formula, this paper mainly provides an overview of the efficacy of Chai Shao Liu Jun Zi Tang and its addition and subtraction formula in spleen and stomach related diseases including chronic gastritis, functional dyspepsia, reflux disease, PU and UC in combination with clinical application of Chai Shao Liu, Jun Zi Tang and its addition and subtraction formula by various medical practitioners compared with conventional western medicine.

The middle jiao contains the spleen and the stomach, which have a relationship with each other. The spleen and the stomach work together to digest, transport, and distribute water and grain, and then the biochemistry of Qi and blood. The ancient theory of the spleen and stomach states that deficiency and evil cannot exist alone to damage the body, but all diseases are caused by the spleen and stomach. The small intestine communicates upward with the stomach through the pylorus and downward with the duodenum and other large intestinal structures. The small intestine is the main organ of the body, and the large intestine is the center of conduction. The large intestine is the conduction center, which mainly transports the food waste and turns it into waste and excretes it. Diseases in the small intestine and large intestine are mainly manifested in the nature of feces.

To cope with the increasingly complex gastrointestinal diseases, the author collected the experience and efficacy of clinical application of Chai Shao Liu Jun Zi Tang and its addition and subtraction in different gastrointestinal diseases by various medical practitioners in the past ten years and the comparison of Chinese and Western medicine data for reference.

1. Chronic gastritis (CG)

1.1 Chronic Atrophic Gastritis (CAG)

CAG as a form of CG, is characterized by atrophy of the gastric mucosal glands, a decrease in the total number of mucosal cells, and, in severe cases, their disappearance. It is accompanied by

thickening of the gastric mucosal muscle layer, sometimes with hyperplasia of the intestinal glands, pylorus and hilar glands, and atypical features of chronic digestive disease. The clinical manifestations of the symptoms are often dominated by gastric distension, heartburn, and dyspepsia, and patients have more or less anemia and other conditions[1] . Berlin[2] with a total of 80 patients with spleen deficiency CAG were divided equally into two groups, control and observation, according to the randomization method, with the former routinely using domperidone and omeprazole and the observation group combined with Chai Shao Liu Jun Zi Tang oral treatment on top of the former. The results showed that there was a difference in cure between the observation (20 cases) and control groups (15 cases), where the total number of significant and effective cases (18 cases) contained in the observation group was more, the effective rate observation and control groups were 97.50% and 82.50% in turn, and there were 7 invalid cases in the control group, ($P<0.05$). Liu et al.[3]. by a total of 90 patients with CAG were divided equally into two groups, control and observation, according to the randomization method, and patients were treated with drugs, and Chai Shao Liu Jun Zi Tang was added to the former in the observation group. From the final results, it can be seen that 30 days after treatment, the healing rate of the observation group (93.4%) was clearly higher than that of the control group (48.8%) ($P<0.05$); after 4 weeks, the blood levels of PG I and PG I/II were found to be higher than those before treatment ($P<0.05$), and the trend of PG II decreased ($P<0.05$). The significance of the change was higher in the observation group ($P<0.05$).

1.2 Chronic Non-Atrophic Gastritis (CNAG)

CNAG refers to a chronic inflammatory disease with no atrophic changes in the mucosa and mucosal infiltration of lymphocytes and plasma cells. In clinical practice, most patients with CNAG do not have symptoms, while some patients have common adverse effects such as abdominal discomfort, bloating, hiccups, and nausea, which are nonspecific. Hong et al. [4]. divided a total of 120 patients with spleen deficiency CNAG into two groups according to the randomization method: control (Western medicine treatment) and observation (Chinese medicine treatment), with Chinese medicine based on Chai Shao Liu Jun Tang and Western medicine based on oral omeprazole capsules. The final results showed that the observation group (93.3% effective rate, greater than the control group (88.3%)) was higher than the control group in terms of the number of cured cases (14 cases) and improved cases (28 cases) than the control group (8 cases) and 12 cases. However, the number of effective cases was less in the observation group (14 cases) than in the control group (33 cases), while the number of ineffective cases was significantly smaller in the observation group (4 cases) than in the control group. Xiong et al. [5], A total of 82 patients with CNAG were divided equally into two groups, control and observation, according to the randomization method. The control group was treated with omeprazole and if H. pylori with antibiotics; the observation group was treated with Chai Shao Liu Jun Tang orally on top of the former. At the end of the study, the level of PGII, G-17, and PGI in the patients was increased, and the level of the above indexes was higher in the observation group, and the difference was significant and meaningful ($P<0.05$). All patients under observation had elevated CD4+/CD8+, CD4+ and decreased CD8+, and the observation group was significantly higher than the control group, with a significant difference ($P<0.05$). The efficiency level was higher in the observation group (87.8%) than in the control group (70.7%), with a significant difference ($P<0.05$).

2. Functional Dyspepsia (FD)

The main clinical symptoms of FD are epigastric pain, bloating, hiccups, nausea, and a host of other manifestations. These manifestations are often recurrent or may persist, and the duration of

the disease can accumulate up to twelve weeks, and in severe cases can greatly exceed this time[6]. We[7] via a total of 82 patients with FD were divided equally into two groups, control and observation, according to the randomization method. The control group was treated with pantoprazole sodium and the observation group was treated with this premise combined with Chai Shao Liu Jun Zi Tang. The results showed that the number of cured, effective, efficient, and invalid cases in the observation group (effective rate 95.35%) and control group (effective rate 74.42%) were 10, 18, 13 and 2; 6, 14, 12 and 11 cases, respectively (P<0.05). After treatment, the serum 5-HT in the observation group was lower than that in the comparison control, while the GAS was higher than that in the control group (all P<0.05). Yan[8] adopted a total of 72 patients with FD were divided equally into two groups according to the randomization method: control and treatment. The treatment group was treated with Chai Shao Liu Jun Zi Tang administration, and the control group was treated with pancreatic enzyme enteric solution tablets. The results showed that the treatment group and control group (effective rates of 97.29% and 77.8%) were significantly effective, effective, progressive, and ineffective in the order of 18 cases, 9 cases, 8 cases, and 1 case; 6 cases, 8 cases, 14 cases, and 8 cases (P<0.05).

3. Reflux Disease

3.1 Reverse Esophagitis (RE)

As a disease caused by the regurgitation of the stomach and intestinal contents into the esophagus, leading to esophagitis in severe cases cytopathy.It is a disease in which there is often mucosal damage on internal examination, i.e., esophageal ulcers. The symptoms are often gastroesophageal reflux；GER；GOR (GERD), but there are not necessarily reflux symptoms, but only epigastric dyspepsia. Representative manifestations include heartburn, reflux, and chest pain[9] . Zhen[10] adopted a total of 82 patients with spleen deficiency type RE were divided into two groups, controls and studies, according to parity. The control group was treated with pantoprazole, and the study group was treated with Chai Shao Liu Jun Tang. The results showed that the manifestations of symptoms were significantly lower in all patients, and were lower in the study group than in the control group (P<0.01); internal examination at the end of the treatment process showed that the mucosal abnormalities in all patients were significantly improved compared with those before treatment, and there was a difference between the two groups (P<0.01).

3.2 GERD

The main cause of this disease is esophageal disease and esophageal disease caused by prolonged exposure to gastric juices in which the esophagus is exposed and muco damage. GERD and its related diseases are caused by multiple factors. Among them is the lack of physiological mechanisms to inhibit reflux in the esophagus itself, such as lower esophageal sphincter disorders, motor abnormalities, abnormal function of external factors, etc. Zhang[11]: A total of 144 patients with GERD with gas reflux were divided into two groups, control and observation, according to the randomization method. The control group was treated with western drugs such as rabeprazole. Observation group:Combined with Chai Shao Liu Jun Zi Tang on top of western medicine treatment. The observation results showed that the number of patients in the control and observation groups (88.9%, and 98.6% effective rate) were cured, significant, effective and ineffective in the order of 27, 25, 12 and 8; 57, 10, 4 and 1 (P < 0.05).

4. Peptic Ulcer (PU)

Under the influence of many lethal factors leading to the production of PU, and its pathogenesis is mainly manifested by the presence of inflammation and detachment of the mucosa of the digestive tract, which in turn leads to the production of ulcers, PU is mainly present in gastric and intestinal ulcers, which is a chronic, multi-infarct and common disease. Through the study, it was found that it is characterized by chronic development, periodic onset of disease, rhythmic abdominal pain, which can be accompanied by digestive system symptoms such as acid reflux, belching, nausea, anorexia, poor appetite, and abdominal distension in patients[12]. Huang Guoxin et al[13], A total of 60 patients with spleen deficiency type PU were randomly and equally divided into two groups: the control group was treated with omeprazole, and the observation group was combined with Chai Shao Liu Jun Zi Tang on top of the former. There were 14, 8, and 8 patients in the control and observation groups (73.3% and 93.3% effective rates) who were significantly effective, effective, and ineffective, respectively; and 22, 6, and 2 patients ($P < 0.05$). TGF-α levels were increased in all patients after treatment, and gas and hsCRP decreased compared with those before treatment, with significant differences ($P < 0.05$) and the degree of TGF-αelevation, gas and hs-CRP decreased more in the treatment group ($P < 0.05$). Feng[14] took a total of 60 patients with PU of spleen deficiency which were divided equally into two groups, control and treatment, according to the randomization method. The control group was treated with esomeprazole, and the treatment group combined Chai Shao Liu Jun Zi Tang on top of the former. In the final results, the treatment group and control group (effective rate 96.7%, 807%) were cured, significant, effective, and ineffective in 11, 10, 8, and 1 patients; 9, 8, 7, and 6 patients, respectively, and the data of both groups were significant ($P<0.05$). Comparing GAS levels before treatment in all patients, the difference in GAS levels was not significant ($P>0.05$); after treatment, the reduction in GAS levels was greater in the treatment group ($P<0.05$).

5. Ulcerative Colitis (UC)

UC has not been validated so far regarding its etiology, and as an atopic colorectal chronic inflammatory disease, it mainly appears in the mucosa of the large intestine and its lower layers and is a common gastrointestinal disease. Clinically, diarrhea and blood in the stool are often predominant, and with the progression of the disease, gastrointestinal perforation and necrosis are likely to occur[15] . Xu et al.[16]. took a total of 60 patients with spleen deficiency type UC were randomly and equally divided into control and observation groups, with the control group treated with mesalazine granules and the observation group combined with Chai Shao Liu Jun Zi Tang on top of the former. In the control group (effective rate 80%), there were 12, 12, and 6 patients who were cured, ineffective, and improved, respectively; in the observation group (effective rate 96.67%), there were 15, 14 and 1 patients who were cured, improved and ineffective respectively ($P<0.05$). Wu [17] brought 60 patients with liver depression and spleen deficiency type UC were randomly divided into 30 patients each in the treatment group and control group, with Chai Shao Liu Jun Tang dose as the treatment group and mesalazine enteric dissolved tablets as the control group. The quality of ulcer healing under colonoscopy was compared: 5 were cured, 18 were effective, and 7 were ineffective in the control group; 13 were cured, 15 were effective, and 2 were ineffective in the observation group ($P < 0.05$).

6. Irritable Bowel Syndrome (IBS)

The main presenting signs that IBS has are abdominal distension and pain, transformation of stool properties and habits, which are persistent or intermittent, and biochemical abnormalities of

intestinal disorders[18] . Chen et al.[19]. brought a total of 75 patients with IBS were divided 2:1 into two groups: treatment (50 cases) and control (25 cases), and the treatment group was treated with Chai Shao Liu Jun Zi Tang; the control group was given oral Si Mo Tang Oral Liquid. The treatment group was treated with Chai Shao Liu Jun Zi Tang; the control group was treated with Si Mo Tang Oral Liquid. The number of patients in the treatment group were 14, 31, and 5, respectively, and the number of patients in the treatment group were 4, 8, and 13, respectively, who were cured, effective, and efficient ($P<0.05$).

It can be concluded that Chai Shao Liu Jun Zi Tang can be widely used in the treatment of the most common diseases of the spleen and stomach system, and a large number of Chinese clinical application studies have initially demonstrated the clinical efficacy of Chai Shao Liu Jun Zi Tang, reflecting the dialectical treatment thinking of "treating different diseases together" in Chinese medicine. The efficacy of this formula has been confirmed, and no significant adverse reactions have been observed, so it is safe and stable for active clinical use.

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