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Short Communication

Effect of Mesalazine Combined with Bifid Triple Viable on Ulcerative Colitis

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Authors' Contribution
QZ and YH collected the samples. XJ and CZ analysed the data. QZ and YH conducted the experiments and analysed the results. All authors discussed the results and wrote the manuscript.

Key words
Mesalazine, Bifid triple viable, High quality nursing, Ulcerative colitis, Clinical curative effect

ABSTRACT

Objective of this study was to observe the clinical effect of mesalazine combined with bifid triple viable (BTV) on ulcerative colitis. One hundred sixty patients with ulcerative colitis were divided into the experimental group accepting mesalazine combined with BTV and the control group accepting mesalazine alone. It was found that the overall treatment effective rate was 93.75%, in the experimental group as against 77.50% in the control group, $p<0.05$. Comparing the levels of inflammatory factors (IL-6,IL-8,TNF-α) before and after treatment in the two groups, the improvement degree of the experimental group after treatment was significantly better than that of the control group, $p<0.05$. The overall nursing satisfaction of the research group was 97.50%, which was significantly higher than the 75.00% of the control group, $p<0.05$. To conclude that combined therapy of mesalazine and BTV can significantly improve the therapeutic effect in patients with ulcerative colitis, and the scientific nursing mode is an important guarantee to improve the therapeutic results.

Ulcerative colitis is a chronic non-specific inflammatory disease of colon and rectum, of which the etiology is unclear. The course of the disease is long and often recurrent (Testa *et al*., 2017; Robin *et al*., 2017; Susan *et al*., 2018). Mesalazine is a common drug in clinical treatment of ulcerative colitis. However, some patients have poor efficacy after using mesalazine alone, and other drugs should be combined applied with mesalazine (Zhao and Hao, 2018). The purpose of this study is to explore the clinical efficacy of mesalazine combined with Bifid Triple Viable (BTV) in the treatment of ulcerative colitis in order to provide a better basis for clinical effective treatment of this disease.

Materials and methods

In this study, 160 patients who had been treated for ulcerative colitis in our hospital from January 2016 to May 2019 were enrolled as research objects. The patients were diagnosed according to the diagnostic norms of inflammatory bowel disease proposed by the gastroenterology branch of the Chinese medical association. Patients with slight and moderate symptoms were selected out according to activities of patients. Patients with chronic schistosomiasis, amebic dysentery, intestinal tuberculosis and malignant tumors were excluded. Patients who were allergic to salicylic acid or bifidobacteria and who had received glucocorticoids or other immune suppressants were excluded. All patients had the right to know and signed a consent form. This study was conducted with the approval of the hospital ethical association. Patients were randomly divided into research group and control group, each containing 80 patients. Patients in the control group were given methalazine (Sunflower Pharmaceutical Group Jiamusi Luling Pharmaceutical Co., Ltd.). SFDA approval number H19980148; Specification: 0.25g/s), at dose of 1.0g each time, and once every 6 hours. On this basis, the patients in the study group were given BTV capsules (Shanghai Xinyi Pharmaceutical Factory Co., Ltd., SFDA approval number S10950032; Specification: 0.21g/s) at dose of 0.42g, twice a day. Both groups were treated continuously for one month. According to the recommendations for the diagnosis and treatment of inflammatory bowel disease, there are three criteria of therapeutic effect, including significantly effective, effective, and ineffective (Gao *et al*., 2018). Serum inflammatory cytokines including interleukin-8 (IL-8), interleukin-10 (IL-10) and tumor necrosis factor-α (TNF α) in the two groups were detected by ELISA before and after treatment. In addition, the overall nursing satisfaction of patients in the two groups was recorded. Statistical

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analysis software SPSS21.0 was used to process data. The measurement data were expressed by mean ± average, with t test conducted for intergroup comparison. Enumeration data were expressed by natural (n) and percentage (%), with X^2 used for intergroup comparison. The intergroup difference is of statistical value when $P < 0.05$.

Results and discussion

There were 45 male patients and 35 female patients in the research group, with an average age of (46.7±2.1) years and an average course of disease of (1.2±0.6) years. There were 42 male patients and 38 female patients in the control group, respectively, with an average age of (47.3±2.8) years and an average course of disease of (1.5±0.9) years. There were no significant differences in general data between two groups, $p>0.05$. Changes of inflammatory factors in peripheral blood of the two groups were studied. Table I shows, the improvement effect of indicators in the research group after treatment was significantly better than that in the control group ($p<0.05$). Comparison of overall treatment effective rate between the two groups showed significant improvement in research group in comparison of controls ($P<0.05$).

The pathogenesis of ulcerative colitis is still controversial. Many researchers believe that it is closely related to environmental factors, genetic susceptibility, intestinal immune disorders and other factors. Studies have found that superoxide dismutase can remove oxygen free radicals under physiological conditions. If ulcerative colitis is formed, a large number of phagocytes in the intestinal mucosa will enter the submucosa and the mucosa, and form oxygen free radicals based on arachidonic acid and oxidase action, which will damage the mucosal cells and improve the permeability of the mucosa. During the onset of the disease, the antioxidant activity of superoxide dismutase in the colon mucosa decreases gradually. Which reduces the scavenging of oxygen free radicals, and further aggravating the disease.

Mesalazine is often used to treat ulcerative colitis. By reducing the secretion function of intestinal mucosa, mesalazine significantly reduces the content of prostaglandins and leukotrienes in the body, reducing inflammation (Zhou *et al*., 2018). At the same time, mesalazine can block the production of cellular oxygen free radicals, which can significantly enhance the body's anti-inflammatory ability. However, after stop using meisalazine, the illness is easy to appear repeatedly therefore long-term medication should be taken, but it will develop drug resistance, reduce the efficacy, and produce more adverse reactions in the gastrointestinal tract. Therefore, single drugs use cannot achieve the goal of improving the quality of life. In this study, the combined therapy of meisalazine and BTV capsule was implemented (Wang, 2018). Mesalazine, chemically known as 5-aminosalicylic acid, is the active ingredient of SASP in the treatment of ulcerative colitis. Mesalazine can inhibit the synthesis of prostaglandin in a dose-dependent manner and reduce the release of PGE2 in human colon mucosa. In addition, mesalatin can inhibit the activity of neutrophil fat oxidase and the synthesis of platelet activity factor that plays an important role in inflammation (Zhao and Hao, 2018). Metasarqin is more effective against the connective tissue of the inflammatory intestinal wall and is used in the treatment of ulcerative colitis. BTV capsules contain the ingredients of *Bifidobacterium longum, Lactobacillus acidophilus, Enterococcus faecalis*, which is suitable for the treatment of intestinal flora disorders, such as mild and medium acute diarrhea, chronic diarrhea, abdominal distention and constipation.

Table I. Effect of mesalazine combined with bifid triple variable on interleukins, CRP and TNFα in patients suffering from ulcerative colitis.

Group	Control group		Research group		t/X2		p	
	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
IL-6 (ng/ml)	190.4±2.7	152.96±10.3	190.3±2.2	66.9±2.5	0.6	6.55	>0.05	<0.05
IL-8 (ng/ml)	213.9±4.0	160.8±4.3	212.67±3.2	88.9±3.3	0.22	5.39	>0.05	<0.05
CRP (mg/L)	5.4±1.1	3.8±0.5	5.1±1.2	2.5±0.3	0.82	6.44	>0.05	<0.05
TNF-α (ng/L)	168.7±2.3	136.0±2.9	166.8±2.1	54.3±2.3	0.1	8.93	>0.05	<0.05
Significantly effective	33		45		10.29		<0.05	
Effective	29		30					
Ineffective	18		5					
Overall treatment effective rate	62(77.50)		75(93.75)					

IL, interleukin-10; TNFα, tumor necrosis factor-α

Conclusions

In conclusion, mesalazine combined with bifidum triple viablecapsule in the treatment of patients with ulcerative colitis can positively improve the level of inflammatory factors in patients, and effectively improve the overall treatment effective rate of patients without causing adverse reactions, which can be promoted in clinical treatment practice.

Statement of conflict of interest

The authors have declared no conflict of interest.

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