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Clinical Observation of Yiqi Yangyin Decoction on Functional Constipation

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Abstract: Objective: *To investigate the final clinical effect of Yiqi Yangyin Decoction in the treatment of functional constipation.* ***Methods:*** *The main subjects of the survey were 120 patients with functional constipation who were included and screened in the Department of Gastroenterology of our hospital from March 2020 to March 2021. During the investigation, the patients were randomly divided into two groups in a 1: 1 manner, i.e., the control group and the experimental group. The number of patients in each group was 60. The patients in the control group were treated with lactulose, and the patients in the experimental group were treated with Yiqi Yangyin Decoction, which was a traditional Chinese medicine. The comparative analysis in the investigation mainly covered defecation indexes before and after treatment, the probability of adverse reactions, the health measurement scale (SF-36) score, and clinical efficacy.* ***Results:*** *Compared with the investigation results of the two groups, there was no significant difference in defecation indexes between the patients in the experimental group and the control group before treatment (P>0.05), but the defecation indexes were significantly improved after treatment (P<0.05). At the same time, the probability of adverse reactions after medication was significantly lower than that in the control group, which significantly improved the quality of life score. The defecation indexes had more significant curative effects. The differences between groups were statistically significant (P < 0.05).* ***Conclusion:*** *The application of Yiqi Yangyin Decoction treatment has many advantages, such as reducing the incidence of recurrence and adverse reactions, maintaining the quality of life of patients, changing adverse defecation symptoms, and speeding up the patient's rehabilitation, which has the value of promotion and application.*
Keywords: *Yiqiyangyin Decoction; Chinese medicine; Western medicine; Functional constipation*

1. Introduction

Functional constipation is a common clinical disease with high incidence in gastroenterology department. In the past, it was mostly seen in the elderly patients. However, due to the change of life style, the disease has become younger. After suffering from the disease, the main clinical symptoms of patients are difficulty in defecation, reducing defecation frequency and abdominal distension, which will have a certain impact on the quality of life of patients. Under normal circumstances, the symptoms mainly including constipation but no organic lesion are called functional constipation. The most common clinical manifestations include prolonged defecation interval, reduced defecation times, small defecation volume, dry feces and arduous defecation, which is most likely accompanied by direct intestinal obstruction. In order to improve this symptom, it is necessary to select the appropriate treatment. In the past, western medicine was mainly used for treatment. However, the survey shows that there are certain disadvantages in the application of western medicine and the probability of recurrence is high. However, the emergence of Yiqi Yangyin Decoction can effectively make up for the shortcomings of western medicine treatment, and achieve the goals of avoiding recurrence, controlling the disease, and accelerating rehabilitation. On this basis, this paper will focus on functional constipation patients using Yiqi Yangyin Decoction treatment of the final effect achieved a detailed and in-depth analysis, the specific content is as follows.

2. General information and methods

2.1 General information

A total of 120 patients were included in the inpatient gastroenterology department from July 2019 to July 2020. All patients were diagnosed with functional constipation after relevant diagnosis, and they were randomly divided into a control group and an experimental group in a 1: 1 grouping way: 60

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patients, 32 males and 28 females, aged 24–82, with an average of (58.69 14.24) years old, and a course of disease of two to eight months, with an average of (5.2 1.2) months. Experimental group (60 subjects, 30 males and 30 females, aged from 22 to 85 years old, with an average of (60.20 15.29) years old, with a course of disease of two to nine months, and an average of (5.7 1.4) months). In addition, patients with mental disorders, pregnancy or diseases of heart, brain, lung and other organs were not included in the survey.

2.2 Methodology

2.2.1 Control group

Patients in the control group were treated with lactulose. Lactulose oral solution (manufacturer: Beijing Hanmei Pharmaceutical Co., Ltd., BatchNo.: GuoYaoZhunZi H20065730) was administered once a day in the morning, at noon and in the evening, with a dose of 15ml each time. The treatment was continued for a total of 15 days.

2.2.2 Experimental group

Patients in the experimental group were treated with Yiqi Yangyin Decoction. The prescription was prepared with 30g of Radix Rehmanniae, Radix Glehniae and Radix Scrophulariae, 20g of Radix Rehmanniae Preparata, Radix Angelicae Sinensis and Radix Paeoniae Alba, 10g of Pericarpium Citri Reticulatae and Semen Persicae, 15g of raw Rhizoma Atractylodis Macrocephalae, and 6g of raw Radix Glycyrrhizae. The decoction was administered in one dose per day by oral administration in the morning, in the middle and in the evening, for a total of 15 consecutive days.

2.3 Observation indicators

(1) The defecation indexes of patients in the two groups before and after treatment were compared, including defecation interval, defecation time and difficulty of defecation.

(2) The incidences of adverse reactions such as increased heart rate, increased blood pressure, nausea and vomiting, and fever were compared between the two groups.

(3) Based on the health measurement scale (SF-36), a scientific evaluation tool, the quality of life scores of the two groups were compared, including role, cognition, emotion, body and society. The score ranged from 0 to 40. The higher the score was, the higher the quality of life of the patients was.

(4) Taking Standards for Diagnosis and Treatment of Diseases in Traditional Chinese Medicine as the basis, we compared the clinical effects of the two groups and divided them into three levels, i.e., cured, markedly effective and ineffective. Total effective rate = (cured+markedly effective) ÷ number of cases in the group ×100%. Cure: The clinical symptoms of the patient disappeared, the defecation interval was shortened, and the fecal quality was restored to normal. Marked effectiveness: The clinical symptoms of the patient were alleviated, the defecation interval was slightly shortened, and the fecal quality became normal. No effect: The clinical symptoms of the patient did not improve or worsen. 1.4 Statistical methods SPSS 23.0 statistical software was used to analyze the data. The enumeration data and measurement data were expressed as [case (%)] and [mean difference ($\bar{x}$ s)], respectively, using $\chi 2$ test and t test. $P<0.05$ was considered as the difference with statistical significance.

3. Outcome

3.1 Comparison of defecation indexes between the two groups before and after treatment

As shown in Table 1, there was no significant difference in defecation indexes between the two groups before treatment ($P>0.05$), but after treatment, the defecation indexes of patients in the experimental group were significantly improved as compared with those in the control group, indicating statistical significance ($P<0.05$).

3.2 Comparison of the incidence of adverse reactions between the two groups

As shown in Table 2, the probability of adverse reactions in the experimental group was significantly lower than that in the control group, indicating statistical significance ($P<0.05$).

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Table 2 Comparison of the incidence of adverse reactions between the two groups(%)

Group Cases Fever	Number of cases	Generate heat	Nausea and vomiting	Elevation of blood pressure	Tachycardia	Total incidence
Control group	60	3(5.00)	4(6.67)	4(6.67)	4(6.67)	15(25.00)
Experimental group	60	1(1.67)	2(3.33)	0(0.00)	2(3.33)	5(8.33)
P value	-	-	-	-	-	0.014
X^2	-	-	-	-	-	6.000

3.3 Comparison of scores of QOL after treatment between the two groups

As shown in Table 3, the quality of life score of patients in the experimental group was significantly higher than that in the control group, which proved to be statistically significant (P<0.05).

Table 3 Comparison of patients' quality of life scores after treatment between the two groups ($x \pm s$)

Group Cases Fever	Role function	Cognitive function	Emotional function	Somatic function	Social function
Control group(n=60)	22.82±5.47	23.64±5.28	21.42±5.03	22.99±5.86	23.94±5.12
Experimental group(n=60)	36.88±9.62	36.85±8.10	37.00±9.95	35.47±8.81	36.99±9.17
P value	0.000	0.000	0.000	0.000	0.000
t value	9.841	10.583	10.824	9.136	9.625

3.4 Comparison of clinical effects between the two groups

As shown in Table 4, the clinical efficacy of patients in the experimental group was significantly better than that in the control group, indicating statistical significance (P<0.05).

Table 4 Comparison of clinical effects between the two groups (%)

Group Cases Fever	Number of cases	Cure	Show effect	Invalid	Total effective rate
Control group	60	30(50.00)	18(30.00)	12(20.00)	48(80.00)
Experimental group	60	37(61.67)	23(38.33)	0(0.00)	60(100.00)
P value	-	-	-	-	0.000
X^2	-	-	-	-	13.333

4. Discussion

Nowadays, functional constipation has become an extremely common disease in clinical medicine, and the number of patients is increasing year by year, and it has developed from the previous high incidence among the elderly to the younger generation. Under normal circumstances, the disease can be mainly divided into three types:

(1) Defecation disorder. It is also called outlet obstructive constipation, with the main characteristics of endless defecation, arduous defecation, feeling of anorectal blockage during defecation, and the need for manual assistance in defecation.

(2) Slow transmission type. It is mainly because the colonic motility is weakened, resulting in the prolonged defecation transmission time. The main characteristics are arduous defecation, dry and hard feces, and reduced defecation times.

(3) Mixed type. Including defecation disorder type and slow transmission type two characteristics. The causes of the disease mainly include three aspects:

1) The lack of physical exercise. Lying in bed for a long time, sitting for a long time, and taking less exercise will weaken the intestinal motility, and thus cause the occurrence of diseases.

2) Bad eating habits. Irregular food intake, less water intake, insufficient intake of fiber, and

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excessive food intake will all cause a lack of intestinal stimulation, leading to the occurrence of diseases.

3) Bad defecation habit. During defecation, the symptoms of unfocused attention, incorrect defecation posture and inhibition of normal defecation will cause rectal sensory dysfunction, thus leading to the initiation of disease. Patients who find themselves experiencing agitation, dizziness, fatigue and weakness, decreased appetite, lower abdominal pain, incomplete defecation sensation, dry and hard feces, and reduced frequency of defecation need to go to the hospital for medical treatment in time so as to control the progression of the disease as soon as possible, restore the defecation function as soon as possible, and maintain their quality of life.

In the previous treatment, lactulose oral solution, a kind of artificial disaccharide, was mainly used in western medicine. Generally, the human body often does not have hydrolyzed lactulose enzyme, which can enter the digestive tract through lactulose to improve osmotic activity and retain water and electrolytes in the intestinal lumen to produce hyperosmotic solution; bacteria in the colon decompose lactulose into organic acids to lower the PH value in the colon, thereby stimulating intestinal peristalsis and reducing the absorption and accumulation of endotoxin, thereby promoting smooth defecation. However, relevant medical scholars pointed out after investigation that the application of this drug would cause patients to become dependent, which would most likely cause dry stool and disease recurrence after drug discontinuation. As a result, the goal of completely curing the patients' functional constipation could not be achieved, and it is no longer suitable for treatment.

In the perspective of traditional Chinese medicine, functional constipation is included in the categories of "adverse after treatment" and "difficult stool". It is proposed in the ancient book True Story of Medicine: Secrets and Conclusions that "the causes for functional constipation lie in the fire of diet, overeating with pungent and hot food, improper diet, excessive room labor or reckless drinking of alcohol and pulp from the spleen and stomach. The fire of lust originates from the mingmen, and to the fire wins the water deficit, causing the body fluid stagnation. Hence, it leads to conduction disorders and gradually becomes the syndrome of dry stagnation." Large intestine is the main site of functional constipation and has a certain correlation with the lung, spleen, kidney, qi, blood and body fluid disorders. Upper energizer of the lung controls qi, resulting in the inability to promote large intestine conduction due to qi deficiency. The middle energizer spleen rises in the clear and descends in the turbid, which is weak and the soil dominates the transportation and transformation, thus causing the dross retention. Yin deficiency in the lower energizer moistens and moistens the intestine, which makes it difficult to defecate. Therefore, in the treatment of functional constipation disease, when to Yiqi Jianpi, Yangyin Runchang-based. In the traditional Chinese medicine prescription of Yiqi Yangyin Decoction, Radix Astragali and Radix Rehmanniae have the effects of nourishing earth and generating gold, replenishing qi and moistening intestine, nourishing yin and moistening dryness, etc. Radix Adenophorae and Radix Angelicae Sinensis have effects of nourishing yin and blood. Radix scrophulariae has effects of purging fire, removing toxic substance, cooling blood, nourishing yin, etc. Radix Rehmanniae Preparata has effects of replenishing blood, nourishing yin, and replenishing essence and marrow. Radix Paeoniae Alba has the effects of astringing Yin, stopping sweating, pacifying liver, relieving pain, nourishing blood and regulating menstruation. The Pericarpium Citri Reticulatae medicinal material has effects of drying dampness, eliminating phlegm, regulating qi, and invigorating spleen. The peach kernel medicinal material has that effect of loosening bowel to relieve constipation and the like; Raw Rhizoma Atractylodis Macrocephalae has effects of invigorating spleen and replenishing qi; Raw Radix et Rhizoma Glycyrrhizae has the effects of relieving drug properties and harmonizing various drugs. Through the combined use of the traditional Chinese medicinal materials, the effects of beating, replenishing qi, nourishing yin, tonifying kidney and moistening intestine can be fully exerted, the clinical symptoms of patients can be effectively relieved, the aim of thoroughly radically treating the functional constipation diseases of the patients is achieved, the patients are ensured to maintain normal defecation times, defecation time and fecal traits, and the treatment effect of the patients is further improved.

Through investigation and analysis, we have found that there was no statistical difference in defecation indexes between patients in the experimental group and the control group before treatment ($P>0.05$). However, after treatment with Yiqi Yangyin Decoction, a traditional Chinese medicine prescription, compared with the control group, the defecation time and interval were effectively shortened and the defecation was easier. At the same time, the probability of adverse reactions such as increased heart rate, increased blood pressure, nausea, vomiting and fever was significantly reduced after treatment, with only 5(8.33%) patients experiencing different types of adverse reactions, while the number of patients in the control group was as high as 15(25.00%). In addition, the scores of role

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function, cognitive function, emotional function, physical function, social function and other quality of life of patients in the experimental group were significantly improved, and a better clinical effect was obtained, with the effect reaching 100%, while that in the control group was only 80%, with significant difference and statistical significance ($P<0.05$).

5. Conclusion

In summary, the Yiqi Yangyin Decoction, a traditional Chinese medicine prescription, has more significant therapeutic effect in the treatment of functional constipation, in that it can effectively maintain the quality of life of patients, reduce the probability of adverse reactions and the probability of recurrence, ensure patients to thoroughly cure the disease, improve the cure rate, effectively improve the time and interval of defecation, and maintain normal fecal quality, thereby enabling patients to be more satisfied with the work of medical staff and reducing the doctor-patient relationship. It has a certain feasibility, effectiveness and safety in the treatment, worthy of promotion and use in clinical treatment.

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Table 1 Comparison of defecation indexes between two groups before and after treatment ($x \pm s$)

Group	Group	Number of cases	Defecation interval(d)		Defecation time(min)		Difficulty of defecation(Minutes)	
			Pre-treatment	Post-treatment	Pre-treatment	Post-treatment	Pre-treatment	Post-treatment
Control group	Control group	60	4.12±1.03	2.69±0.98	8.43±3.67	6.28±1.98	5.38±2.69	3.69±1.87
Experimental group	Experimental group	60	4.25±1.01	1.01±0.46	8.32±3.69	2.12±0.96	5.41±2.68	2.43±1.00
P value	P value		0.487	0.000	0.870	0.000	0.951	0.000
t value	t value	-	0.698	12.020	0.164	14.644	0.061	4.602