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CLINICAL RESEARCH

Analysis of the Prognostic Effect of Fupi Yichang Decoction on Patients with Colorectal Adenoma Polypectomy

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Keywords

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Abstract

Objective To analyze the prognostic effect of Fupi yichang decoction on patients with colorectal adenoma polypectomy. **Methods** A total of 60 patients with colorectal adenoma polypectomy who were diagnosed in our hospital and met the inclusion criteria were selected from July 2017 to July 2019, and they were randomly divided into observation group and control group according to the random number table method. The control group was treated with conventional treatment, and the observation group was further treated with Fupi yichang decoction based on the control group. The clinical symptom score, adenoma status, recurrence status and overall clinical efficiency in six months after surgery and one year after surgery were compared between the two groups. **Results** The clinical symptom score, adenoma status, recurrence status and overall clinical efficiency in six months after surgery and one year after surgery in observation group were significantly better than those of control group. **Conclusion** The Fupi yichang decoction can improve the clinical symptoms and adenomas of patients with colorectal adenoma polypectomy, with a high clinical effectiveness and low recurrence rate, showing a significant prognosis effect.

Introduction

Colorectal adenomatous polyps are one of the precancerous lesions of colorectal cancer, and about 93% of colorectal cancers evolve from colorectal adenomatous polyps, thus, effective treatment of colorectal adenomatous polyps is essential for the prevention of colorectal cancer [1]. Currently, endoscopic polypectomy is often used to treat patients with colorectal adenomatous polyps, but it does not reduce the recurrence and chances of malignant transformation, thus often requires certain adjuvant therapies after surgery. According to TCM [2], polyps are caused by poor diet, spleen and stomach disorders, and treatment should focus on strengthening the spleen and clearing the intestines. In the present study, we applied the formula of Fupi yichang decoction to

treat patients with adenomatous polypectomy of the large intestine after surgery, and analyzed its prognostic effect. The current study provides reference for the clinical treatment of patients with adenomatous polypectomy of the large intestine.

Clinical data

Study Subjects

A total of 60 patients who underwent adenomatous polypectomy at our hospital between July 2017 and July 2019 and met the inclusion criteria were selected as the study subjects, and were divided into an observation group and a control group using a randomized numerical table, with 30 cases in each group. In the observation group, there were 18 males and 12 females, with a mean age of 60.25 ± 12.03 years old and a body mass index (BMI) of 21.14 ± 4.03 kg/m2. In the control group, there were 16 males and 14 females, with an average age of 59.87±11.95 years old and a BMI of 21.23±4.15 kg/m2. All the patients voluntarily participated in the study and signed the informed consent form, and the differences between the two groups in terms of sex, age, BMI and other general information were not statistically significant and were comparable (P>0.05).

Inclusion and exclusion criteria Inclusion criteria

Patients diagnosed with adenomatous polyps of the large intestine by colonoscopy and pathological diagnosis and who have undergone successful polypectomy. Exclusion criteria: patients whose pathological diagnosis showed that the polyps had become cancerous, or patients with serious primary diseases such as in hematopoietic system and endocrine system.

Methods

Patients in the control group were treated with anti-infective, anti-inflammatory and parenteral nutritional support; patients in the observation group were treated with Fu-Spleen and Intestine formula based on the control group, which consisted of 30 g of white lentils, 15 g of Codonopsis pilosulae, 15 g of Coix Seed, 15 g of Chinese yam, 15 g of Rhizoma Atractylodis Macrocephalae, 15 g of Scutellaria baicalensis on carbon, 15 g of Sophorae Flavescentis Radix, 15 g of Crinis Carbonisatus, 12 g of Poria Cocos, 9 g of Pericarpium Citri Reticulatae. All the patients were treated for 8 courses of treatment, with 7 days as a course. The prescription was decocted in water to 400 mL, taken 1 dose a day in the morning and evening.

Observational Indicators

Scoring of Clinical Symptoms

With reference to Chinese Medicine Clinical Research of New Drugs Guiding Principles [3], patients' abdominal pain, blood in stool, stool frequency, stool property, and stool habits were scored before surgery, six months after surgery, and one year after surgery. The higher the score indicated more obvious clinical symptoms of he patients.

Adenoma condition

Colonoscopy was performed before surgery, six months after surgery, and one year after surgery to compare the number of adenomas, the largest diameter of adenomas, and the average diameter of adenomas in the two groups of patients at each period.

Recurrence

When new polyps were found at the original site or other sites, regardless of whether the pathological type of the new polyps was adenoma, they were considered as recurrence. The recurrence status of the two groups of patients six months and one year after surgery was compared.

Clinical effectiveness

The clinical effectiveness of treatment was evaluated based on the improvement of clinical symptoms and the change of symptom score difference. Cured: patients' clinical symptoms disappeared and their symptom score was decreased by more than 95%; significantly effective: patients' clinical symptoms improved significantly and their symptom score was decreased by 70%-94%; improved: patients' clinical symptoms relieved and their symptom score was

decreased by 30%-69%; ineffective: patients' clinical symptoms did not improve significantly and their symptom score was decreased by less than 30%. Total effective rate = (recovered + significant effect) number of cases / total number of cases × 100%.

Statistical analysis

Statistical analysis was performed using SPSS 20.0, $\chi 2$ test was used for comparison of count data, rank sum test was used for comparison of rank data, and mean ± standard deviation (SD) was used for comparison of measurement data, and t-test was used for comparison.

Results

Comparison of clinical symptom scores between two groups of patients six months and one year after surgery.

The abdominal pain, blood in stool, stool frequency, and stool habit scores were significantly lower in the control group than in the six months after surgery ($P<0.05$), with the above four parameters significantly lower in the observation group than in the control group ($P<0.05$) at one year after surgery ($P<0.05$), as shown in Table 1.

Comparison of adenomas between two groups of patients six months and one year after surgery

The maximum diameter of adenomas and the average diameter of adenomas in the observation group were significantly lower than those in the control group six months and one year after surgery ($P<0.05$), as shown in Table 2.

Table 1 Comparison of clinical symptom scores between two groups of patients six months and one year after surgery（mean ± SD）

Groups	Cases	Time	Abdominal pain	Blood in stool	Stool frequency	Stool property	Stool habits
Observation group	30	Before surgery	1.96±0.47	1.68±0.87	1.91±0.85	0.73±0.31	1.59±0.74
		Six months after surgery	1.12±0.49[b]	0.59±0.22[b]	1.29±0.52[b]	1.23±0.58	1.15±0.47[b]
		one year after surgery	0.96±0.43[b]	0.21±0.13[ab]	0.87±0.36[ab]	1.07±0.66	0.63±0.22[ab]
Control group	30	Before surgery	1.83±0.52	1.75±0.81	1.83±0.76	0.81±0.25	1.64±0.68
		Six months after surgery	1.75±0.62	1.42±0.73	1.71±0.64	1.31±0.65	1.53±0.62
		one year after surgery	1.68±0.57	0.93±0.31[a]	1.45±0.57	1.13±0.71	1.39±0.57

Note: Compared with six months after surgery, [a]$P<0.05$; compared with the control group at the same time, [b]$P<0.05$.

Table 2 Comparison of adenomas between two groups of patients six months and one year after surgery ($\bar{x}\pm s$)

Groups	Cases	Time	Number of adenomas	Maximum diameter of adenomas (mm)	Average diameter of adenomas (mm)
Observation group	30	Before surgery	3.12±1.41	0.85±0.42	0.81±0.33
		Six months after surgery	0.61±0.23	0.08±0.03a	0.09±0.05a
		one year after surgery	0.36±0.15	0.04±0.02a	0.06±0.03a
Control group	30	Before surgery	2.95±1.52	0.91±0.36	0.74±0.26
		Six months after surgery	0.72±0.33	0.16±0.08	0.13±0.08
		one year after surgery	0.42±0.18	0.11±0.05	0.12±0.04

Note: Compared with the control group at the same time, aP<0.05.

Comparison of recurrence between two groups of patients six months and one year after surgery

There was no significant difference in the recurrence rate between the two groups at six months after surgery (P>0.05), and the recurrence rate at one year after surgery was significantly lower in the observation group than in the control group (P<0.05), as shown in Table 3.

Comparison of clinical outcomes between the two groups of patients six months and one year after surgery.

The total effective rate of clinical treatment was significantly higher in the observation group than in the control group at six months and one year after surgery (P<0.05), as shown in Table 4.

Table 3 Comparison of recurrence between two groups of patients six months and one year after surgery

Groups	Cases	Six months after surgery		One year after surgery	
		Recurrence	No recurrence	Recurrence	No recurrence
Observation group	30	6	24	6	24
Control group	30	9	21	13	17

Note: Six months after surgery, $\chi 2=0.800$, P>0.05; 1 year after surgery, $\chi 2=3.774$, P<0.05.

Table 4 Comparison of clinical outcomes between two groups of patients six months and one year after surgery

Groups	Cases	Six months after surgery				One year after surgery			
		Cured	Significantly effective	Improved	Ineffective	Cured	Significantly effective	Improved	Ineffective
Observation group	30	10	12	5	3	10	14	4	2
Control group	30	5	6	14	5	5	7	12	6

Note: Six months after surgery, Z=-2.408, P<0.05; 1 year after surgery, Z=-2.774, P<0.05.

Discussion

Colorectal cancer is one of the common malignant tumors of the digestive system, with rapid cell proliferation and a high risk of distant metastasis and local infiltration. Currently, patients with adenomatous polyps of the large intestine are often treated by polypectomy, which is often supplemented by conventional treatment such as anti-inflammatory and anti-infective therapies after surgery, but the effect of conventional treatment on inhibiting the progression of adenoma and reducing the recurrence rate is weak, which affects the prognosis of patients. In the present study, the patients were treated with the Fupi Yichang Decoction formula on the basis of conventional treatment, and achieved satisfactory results.

The Yellow Emperor's Classic of Internal Medicine says: "Hanqi flows outside the intestines, and the Qi cannot be nourished, cold pathogen resides inside the body, thus, polyps are born". According to traditional Chinese medicine, polyps are mainly caused by emotional depression and dietary irregularities, which lead to abnormal spleen and stomach functions, therefore, clinical treatment should focus on strengthening the spleen and clearing the intestines and heat and promoting diuresis. In this formula, Dang Shen, Chinese Yam, Atractylodes Macrocephalae, Pericarpium Citri Reticulatae, Poria Cocos, etc. are all effective in strengthening the spleen and invigorating Qi, and they are all sovereign drugs; Coix Seed can strengthen the spleen and remove dampness, promote diuresis and reduce swelling, and clear heat and drain pus; white lentils can strengthen the spleen and stomach, disperse summerheat and eliminate dampness, and they were all ministerial drugs; Sophorae Flavescentis Radix can clear heat and remove toxins while suppressing the warmth of ministerial and sovereign drugs. Scutellaria baicalensis charcoal and Scutellaria baicalensis on carbon can resolve stasis, clear heat and stop bleeding.

The results of this study showed that the clinical symptom scores, adenoma status, recurrence rate and total clinical treatment effectiveness of patients treated with Fupi Yichang decoction formula were significantly better than those of patients treated with conventional treatment six months and one year after surgery. Modern pharmacological studies show that the rich volatile oil and nerolides in orange peel have a mild stimulating effect on the digestive tracts, and can promote the secretion of intestinal and digestive juices, enhance gastrointestinal peristalsis and defecation, and thus improve patients' stool habits, stool frequency and other clinical symptoms [6]. Coix seed extract can specifically inhibit the nuclear factor Kappa B-induced gene transcription and protein kinase C activity and the proliferation of adenocarcinoma cells. Therefore, the combined use of these drugs can inhibit the growth of postoperative adenocarcinoma while reducing the recurrence rate and improving the prognosis of patients.

In summary, Fupi Yichang decoction can improve the postoperative clinical symptoms and adenoma of patients undergoing adenomatous polypectomy of the large intestine, with a high clinical treatment effectiveness, low recurrence rate, and remarkable prognostic effect.

Declaration of conflict-of-interest

The authors declare no conflict-of-interest.

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