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Clinical Study

Observation on effects of moxibustion at abdominal acupoints for slow transit constipation due to yang deficiency of the spleen and kidney

艾灸腹部穴位治疗脾肾阳虚型慢传输型便秘的疗效观察

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Abstract
Objective: To observe the clinical effects of moxibustion at abdominal acupoints for slow transit constipation (STC) due to yang deficiency of the spleen and kidney.
Methods: A total of 52 cases with slow transit constipation in conformity with the inclusion criteria were selected and divided into a control group and an observation group according to their visit order and random digital table, 26 cases in each group. Patients in the control group received routine nursing guide. Besides the same routine nursing guide, patients in the observation group received moxibustion at the abdominal acupoints, once every day. The course of the treatment was 4 weeks in the two groups, and the 3-month follow-up was given after the course was finished, for comparing the clinical symptoms, results of colon transit tests, scores of depression/anxiety scale and nursing satisfaction.
Results: The total effective rate was 92.3% in the observation group and 69.2% in the control group, with a significant difference between the two groups. After the treatment and during the follow-up checks, the scores of Chinese medical symptoms in the two groups were remarkably decreased than those before the treatment (all P<0.01); the scores of the observation group were obviously lower than those in the control group (all P<0.01). The discharge rates of the markers in the two groups were remarkably increased than those at the same time period before the treatment; moreover, the discharge rates of the markers at various time periods were remarkably better in the observation group than those in the control group (P<0.01). SDS and SAS scores were remarkably decreased after the treatment in the two groups (P<0.01). In comparison of SDS score between the two groups after the treatment, the difference was statistically significant (P<0.01). In comparison of SAS score between the two groups after the treatment, the difference was statistically significant (P<0.05). The nursing satisfaction was 96.2% in the observation group after the treatment, obviously better than that in the control group (73.1%). The recurrence rate was 8.3% in the observation group, remarkably lower than that in the control group (33.3%).
Conclusion: Moxibustion at the abdominal acupoints plus routine nursing can remarkably improve the colon transit functions and anxious and depressive emotion in patients with STC, and the therapeutic effects are remarkable. Not only the clinical satisfaction is higher, but the recurrence rate is obviously lower than that of routine nursing.
Keywords: Moxibustion Therapy; Points, Abdomen; Anxiety; Depression; Spleen-kidney Yang Deficiency; Constipation

【摘要】目的：观察艾灸腹部穴位对脾肾阳虚型慢传输型便秘(STC)的临床疗效。**方法：**选取符合纳入标准的STC患者52例，按照就诊顺序采用随机数字表法分为对照组和观察组，每组26例。对照组接受常规护理指导，观察组在接受与对照组相同的常规护理指导基础上接受艾灸腹部穴位治疗，每日1次。两组患者疗程均为4星期，疗程结束后随访3月。分别比较两组临床症状、结肠传输试验结果、抑郁/焦虑量表评分及护理满意度。**结果：**观察组总有效率92.3%，对照组为69.2%，两组差异具有统计学意义；两组治疗后及随访时中医症状积分较本组治疗前均显著降低(均P＜0.01)，且观察组均明显低于对照组(均P＜0.01)；两组治疗后标记物排出率较同时段治疗前显著增加(P＜0.01)，且各时段观察组标记物排出率明显优于对照组(P＜0.01)；两组治疗后SDS、SAS评分较本组治疗前显著降低(P＜0.01)，两组治疗后SDS组间比较，差异具有显著统计学意义(P＜0.01)，两组治疗后SAS组间比较，差异具有统计学意义(P＜0.05)；观察组疗程结束后护理满意度为96.2%，明显优于对照组(73.1%)，观察组随访复发率为

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8.3%，显著低于对照组(33.3%)。**结论：**腹部穴位艾灸结合常规护理能够显著改善 STC 患者结肠传输功能和焦虑抑郁的情绪，疗效显著，不仅临床满意度高，而且复发率显著低于常规护理。

【关键词】灸法；穴位，腹部；焦虑；抑郁；脾肾阳虚；便秘

【中图分类号】R245.8　　**【文献标志码】**A

Slow transit constipation (STC) is a common disease of the digestive system, a chronic and intractable constipation characterized by prolonged emptying of the intestinal contents, and normal discharging functions of the pelvic floor and rectum, due to dysfunction of colon transmission[1-2]. STC is manifested with decreased bowel movements, difficult defecation and no desire for defecation. The etiology and pathogenesis of STC are still unknown. Therefore, the drug therapy can only be used to relieve the symptoms temporarily and is not ideal in long-term effects. Currently, the routine nursing for chronic constipation is mainly focused on psychological nursing, health education and guidance of drug administration[3-4]. In recent years, based upon routine nursing and drug treatment, we treated STC patients with spleen-kidney yang deficiency syndrome with moxibustion at the abdominal acupoints. Now, the report is given as follows.

1 Clinical Materials

1.1 Diagnostic criteria

1.1.1 Diagnostic criteria of Western medicine

In reference to the diagnostic criteria of STC in the *China Diagnostic and Therapeutic Guide for Chronic Constipation* (2013 Wuhan)[5]: at least 25% feeling difficult in defecation; at least 25% having hard stool or ball-shaped stool; at least 25% needing finger or pelvic support to defecate, and at least less than three defecations per week. STC could be diagnosed two or more items were met and the duration was over six months.

1.1.2 Diagnostic criteria of traditional Chinese medicine (TCM)

It was based on the diagnostic criteria of spleen-kidney yang deficiency pattern in the *Consensus on Traditional Chinese Medicine Diagnosis and Treatment of Chronic Constipation*[6].

Major symptoms: Difficult defecation, dry or not dry stool, deep and slow pulse.

Secondary symptoms: Abdominal pain, relieved by warmth; pale complexion; cold sensation in four limbs; long and clear urine; pale tongue and white tongue coating. Yang deficiency syndrome of the spleen and kidney could be diagnosed, if the major symptoms and any two of the five secondary symptoms were met.

1.2 Inclusion criteria

In conformity with the diagnostic criteria of Western medicine for STC and TCM diagnostic criteria for spleen-kidney yang deficiency syndrome; age ranged from 20 to 75 years old; signed the informed consent of clinical ethic study.

1.3 Exclusion criteria

The patients sick with constipation-predominant irritable bowel syndrome or outlet obstructive constipation; the patients sick with gastric and/or duodenal ulcer, hepatic dysfunction or malignant tumor in the digestive system; those accompanied by serious diseases in the respiratory, circulatory, urinary, endocrine and nervous system; and those in pregnancy, ready for pregnancy or in lactation period.

1.4 Dropout criteria

The patients unwilling to continue the test; those occurring with serious complications and inappropriate to continue this test; and those lost to follow-up.

1.5 Rejection criteria

The patients in poor compliance, taking drugs by themselves, and those with incomplete data influencing the assessment of the therapeutic effects

1.6 Statistic analysis

The SPSS 20.0 version statistical software was used for statistical analysis. The measurement data in normal distribution were expressed by mean ± standard deviation ($\bar{x} \pm s$). The paired sample *t*-test was used for comparison within the group. The independent sample *t*-test was used for comparison between the groups. The counting data were processed by Chi square test. The grading data were processed by Mann-Whitney rank-sum test. $P<0.05$ indicated a statistical difference.

1.7 General data

Totally, 52 STC patients were enrolled from the digestion clinic of Nangang Branch of Heilongjiang Provincial Academy of Chinese Medicine between June 2016 and November 2016. In accordance with the visiting order, the 52 cases were divided into a control group and an observation group based upon the random digital table, 26 cases in each group. The differences in the general data of gender, age and duration were not statistically significant between the two groups (all $P>0.05$), indicating that the two groups were comparable (Table 1).

Table 1. Comparison of general data between the two groups

Group	*n*	Gender (case)		Average age ($\bar{x}$ ±*s*, year)	Average duration ($\bar{x}$ ±*s*, month)	Defecation per week ($\bar{x}$ ±*s*, time)
		Male	Female			
Observation	26	11	15	55.7±11.3	3.8±1.6	1.00±0.49
Control	26	12	14	55.4±13.6	4.4±1.6	1.08±0.48
Statistical value		0.078[1)]		0.067[2)]	−1.237[2)]	−0.570[2)]
P-value		0.780		0.947	0.222	0.571

Note: 1) x^2 value; 2) *t*-value

2 Methods

2.1 Observation group

2.1.1 Routine nursing

Psychological nursing: Really took care of the patients, listened to the patient's complaint; helped the patients to build up a correct cognition and eliminate their fear; communicated with the patient's family member to create the understanding and mutual assistance among the family members.

Health education: Guided the patients to build up a habit to drink 800-1 000 mL warm water every morning, and to intake the foods containing lots of fibers every day, for instance large number of vegetables, fruits and coarse grains, in order to promote peristalsis of the intestines; guided the patients to build up the habit to have regular bowel movement, to defecate at a regular time, and maintain a proper amount of exercise; guided the patients to use medications appropriately and avoid drug dependence or repeated drug administration.

2.1.2 Moxibustion treatment

Acupoints: Zhongwan (CV 12), Qihai (CV 6), Guanyuan (CV 4), and bilateral Tianshu (ST 25).

Methods: The patient took a supine position. After ignited the two ends, 5 pieces of smokeless moxa roll of 3 cm in length were put into a preset position of the moxibustion box to point to the above acupoints, and then were fixed with belt to avoiding rolling. Afterward, put the moxibustion box on the patient's abdomen and covered it with a transparent film, with a piece of thin cotton yarn between the abdomen and moxibustion box in order to avoid moxa ashes dropping down and causing burning (Figure 1).

Figure 1. Moxibustion at abdominal acupoints

During moxibustion, it was necessary to ask the patient's feeling frequently, in order to avoid overheat causing burning. The patient's distending pain, itch and heavy sensation were all moxibustion sensation. It was the best, if the hot sensation radiated and penetrated to the abdomen. Moxibustion was applied for 30 min each session and was given once every day. The treatment was given for four weeks continuously, and follow-up was given for three months.

2.2 Control group

The patients in the control group only received the routine nursing same as in the observation group, for four weeks constantly.

3 Observation of Therapeutic Effects

3.1 Observed items

3.1.1 Score of TCM syndromes

Before the treatment, after the treatment and during follow-up, the changes of two major symptoms and five secondary symptoms were recorded respectively. The major symptoms were scored from 0 to 3 points, based upon no, mild, moderate and severe condition, and the secondary symptoms were scored from 0 to 1 point, based upon no or existence. The lowest total score was 0 and the highest score was 11 points. The higher the score, the severer the condition[7].

3.1.2 Colon transmission test[8]

Respectively, 6 d before the treatment and after the end of the treatment, the patients were asked to take the capsules containing 20 pieces of markers, and to shoot the belly film in standing position, at 48 h, 72 h and 120 h after capsule administration, and were enrolled into the group for treatment on the second day after the end of the third radiograph, for respectively observing the discharging rate of the markers before and after the treatment in the two groups. Discharging rate = Discharging number ÷ (Discharging number + Residual number) × 100%.

3.1.3 Scores of depression and anxiety

Before and after the treatment, the patients in the two groups were assessed by self-rating depression scale (SDS) and self-rating anxiety scale (SAS) respectively. SDS contains 20 items, divided into four grades of scores, with the highest score of 80 points. SDS over 53 points was regarded as having depressive symptoms. The higher the SDS score, the severer the depressive symptom. SAS contains 20 items, dividing into four grades of scores, with the highest scores in 80 points. The higher SAS scores were, the severer the anxiety symptoms. SAS score $>$50 points and $<$60 points, mild anxiety; SAS score $\geqslant$60 points and $\leqslant$69 points, moderate anxiety; SAS score $>$ 69 points, severe anxiety.

3.1.4 Satisfaction of the patients

In accordance with the situations of the patients in control of emotion, cognition of harms, humanistic concern, regulation of diet, habit of sports, and proper administration of drugs, and assessment of the clinical nursing quality, the nursing satisfaction was observed in the patients of the two groups, determined as unsatisfied, fairly satisfied and satisfied, for comparing the total satisfaction rate in the patients.

3.1.5 Recurrence rate

The follow-up check was given three months after the end of the treatment, to record the recurring situation of the two groups.

Recurrence rate = Number of recurrence ÷ (Amount of group sample − Failure number) × 100%.

3.2 Criteria of therapeutic effects

The criteria of the therapeutic effects of this study were stipulated in accordance with *Criteria of Diagnosis and Therapeutic Effects of Diseases and Syndromes in Traditional Chinese Medicine*[9].

Cure: Stool was discharged smoothly, in soft and moist quality, once every day or every other day.

Remarkable Effect: Stool was easily discharged, in soft quality, once every 2-3 d.

Effect: The difficulty in defecation was relieved and the interval of defecation was shortened.

Failure: No improvement or even aggravated in clinical symptoms, stool quality and interval of defecation.

3.3 Results

3.3.1 Clinical effects

After the treatment, the differences of the therapeutic effects between the two groups were statistically significant ($P<0.05$). The total effective rate was remarkably higher in the observation group than that in the control group, with a statistical difference ($P<0.05$). The results indicated that the therapeutic effects in the treatment of STC by moxibustion at the abdominal acupoints plus routine nursing were better than those by simple routine nursing (Table 2).

Table 2. Comparison of clinical effects between the two groups (case)

Group	*n*	Cure	Remarkable effect	Effect	Failure	Total effective rate (%)
Observation	26	9	8	7	2	92.3
Control	26	2	6	10	8	69.2
Statistical value			−2.924[1)]			4.457[2)]
P-value			0.003			0.035

Note: 1) *Z*-value; 2) x^2 value

3.3.2 Score of TCM symptoms

In comparison of the score of TCM symptoms before the treatment between the two groups, the difference was not statistically significant ($P>0.05$), indicating that the two groups were comparable. After the treatment and in follow-up, the scores of TCM symptoms in the two groups were remarkably lower than those of the same group before the treatment (all $P < 0.01$), indicating that moxibustion at abdominal acupoints plus routine nursing and simple routine nursing could alleviate the clinical symptoms of STC patients. After the treatment and in the follow-up, the scores of TCM symptoms were obviously decreased in the observation group than those in the control group (all $P<0.01$), indicating that moxibustion at abdominal acupoints plus routine nursing was better than simple routine nursing in the improvement of TCM symptoms in STC patients (Table 3).

Table 3. Comparison of TCM symptom score between the two groups ($\bar{x}$ ±*s*, point)

Group	*n*	Before treatment	After treatment	*t*-value	*P*-value	Follow-up	*t* -value	*P*-value
Observation	26	11.04±1.31	4.96±1.71	4.171	0.000	4.85±1.62	3.972	0.000
Control	26	11.23±1.37	9.23±1.48	2.324	0.001	10.24±1.36	1.021	0.009
t-value		0.518	9.637			13.089		
P-value		0.607	0.000			0.000		

3.3.3 Results of colon transmission functions

Before the treatment, the differences in the discharging rates of the markers at the 24 h, 48 h and 120 h after administration of capsules in the two groups were not statistically significant (all $P>0.05$), indicating that the two groups were comparable. After the treatment, the discharging rates of the markers at the 24 h, 48 h and 120 h after administration of capsules in the two groups were remarkably elevated, statistically different from the measuring results of the same group at the same time points before the treatment ($P<0.01$), indicating that moxibustion at the abdominal acupoints plus routine nursing and simple routine nursing could both remarkably improve the colon transmitting functions of STC patients, and increase the discharge of the markers. The discharging rates of the markers at the three time points in the observation group were obviously higher than those in the control group (all $P<0.01$), indicating that in the improvement of the colon transmitting functions of STC patients, moxibustion at the abdominal acupoints plus routine nursing was better than simple routine nursing (Table 4).

3.3.4 Situations of depression and anxiety

In comparison of SDS and SAS scores before the treatment between the two groups, the differences were not statistically significant (all $P>0.05$), indicating that the two groups were comparable. After the treatment, SDS and SAS scores were remarkably lower than those of the same groups before the treatment (all $P<0.01$), indicating that moxibustion at the abdominal acupoints plus routine nursing and simple routine nursing could both remarkably alleviate depression and anxiety of the patients. SDS and SAS scores were both obviously lower in the observation group than in the control group (all $P<0.05$), indicating that in the improvement of depression and anxiety of the patients, moxibustion at the abdominal acupoints plus routine nursing was better than simple routine nursing (Table 5).

Table 4. Comparison of discharging rates of the markers between the two groups ($\bar{x}$ ±*s*, %)

Group	*n*	Rate at 48 h		*t*-value	*P*-value	Rate at 72 h		*t*-value	*P*-value	Rate at 120 h		*t*-value	*P*-value
		Before treatment	After treatment			Before treatment	After treatment			Before treatment	After treatment		
Observation	26	10.96±4.00	30.57±5.54	−5.462	0.000	30.96±5.48	43.85±5.35	−9.449	0.000	50.57±6.83	85.85±6.88	−16.917	0.000
Control	26	9.23±4.40	24.23±7.31	−12.093	0.000	29.04±4.69	36.54±6.45	−4.837	0.000	52.69±6.82	64.04±6.00	−7.739	0.000
t-value		−1.483	−3.530			−1.359	−4.449			1.118	−13.178		
P-value		0.144	0.001			0.180	0.000			0.269	0.000		

Table 5. Comparison of SDS and SAS scores between the two groups ($\bar{x}$ ±*s*, point)

Groups	*n*	SDS		*t*-value	*P*-value	SAS		*t*-value	*P*-value
		Before treatment	After treatment			Before treatment	After treatment		
Observation	26	67.69±5.03	49.81±7.84	−9.276	0.000	62.08±6.85	46.00±6.85	−4.115	0.000
Control	26	68.65±5.47	58.77±6.30	−7.335	0.000	61.69±5.89	49.81±4.64	−5.672	0.000
t-value		0.660	4.540			−0.217	2.410		
P-value		0.513	0.000			0.829	0.020		

3.3.5 Satisfaction of treatment

Twenty-one cases with satisfaction, 4 cases with fairly satisfaction and 1 case with un-satisfaction in the observation group, while 12 cases with satisfaction, 7 cases with fairly satisfaction and 7 cases with un-satisfaction in the control group, and the differences between the two groups were statistically significant ($Z=-2.728$, $P=0.006$). In the rate of satisfaction, the total satisfactory rate was 96.2% in the observation group and 73.1% in the control group, and the differences between the two groups was statistical

significant ($\chi^2 = 5.318$, $P = 0.021$). Those findings indicated that moxibustion at the abdominal acupoints plus routine nursing was much appreciated by the patients than simple routine nursing (Table 6).

3.3.6 Recurrence rate

There were no obvious adverse reactions, no rejected cases and dropped out cases in the two groups during the treatment. In the follow-up, 6 cases had relapse in the control group, accounting for 33.3%; 2 cases in the observation group, accounting for 8.3%, and the difference in the recurrence rate between the two groups were statistically significant ($\chi^2 = 4.169$, $P=0.041$). The findings indicated that moxibustion at the abdominal acupoints plus routine nursing was better than simple routine nursing in the long-term therapeutic effects.

Table 6. Comparison of nursing satisfaction between the two groups (case)

Group	*n*	Satisfied	Fairly satisfied	Unsatisfied	Satisfaction rate (%)
Observation	26	21	4	1	96.2
Control	26	12	7	7	73.1
Statistical value			−2.728[1)]		5.318[2)]
P-value			0.006		0.021

Note: 1) *Z*-value; 2) x^2 value

4 Discussion

In the recent years, with the fast work pace and elevated standard of living, the incidence rate of chronic constipation presents an increasing tendency annually. Shown by the epidemiological investigation, 16% of the healthy adults are troubled by constipation in the world. The incidence rate of STC occupies about 46% of the total incidence rate of chronic constipation. In China, the incidence rate of STC is about 10%-15%. Because it is low in the curative rate and has severely impacts on the quality of life (QOL) and induces the cardiovascular diseases, it has become an issue needed to be solved in the world[10-11]. The pathogenesis of STC is very complicated. On one hand, emotion and stress can elevate the sensitivity of the internal organs and change the motional rhythm of the intestines. On the other hand, the abnormalities in the nervous system, including abnormalities in the intestinal nervous system and in the neural transmitters (norepinephrine, substance P, stomatostatin, acetylcholine, vasoactive peptide and 5-hydroxytryptamine), can all change the transmitting functions of the colon. Besides, the pathological changes of Cajal interstitial cells in the myenteric plexus, deep myenteric plexus and submucosal plexus and abnormalities of the intestinal smooth muscle are all closely related to the transmitting functions of the colon[12]. Now, the clinical therapy for this problem mainly includes drug treatment and surgical treatment. On one hand, the medical workers are puzzled by dependence caused by long-term administration of drugs and the damage and inhibition of the intestinal wall cells. On the other hand, the surgical risk, post-operative recurrence rate and serious complications could not be neglected[13]. Therefore, proper clinical nursing measures not only can assist STC patients to regulate psychological state and life habit, and enhance the patience and confidence of the patients for the treatment, but also can reduce the patient's dependence on drugs and enhance the clinical effects and QOL[14-16].

STC belongs to the scope of *Xu Mi* (deficient constipation) and *Pi Yue* (splenic constipation) in TCM. It is said in *Jing Yue Quan Shu* (*Complete Works of of Zhang Jing-yue*) that if yang is deficient in the lower jiao, yang qi will not flow. Once yang qi does not flow, it fails to transmit. As a result, yin is condensed downward, leading to yang deficiency and accumulation of yin. This disease is mostly induced by long-term accumulation of dampness and heat in the hollow organs, causing insufficiency of the vital energy, deficiency of qi and blood. Although the problem is in the large intestine, it is closely related to the spleen and kidney. Therefore, this disease must be treated by warming and reinforcing the spleen and kidney, reinforcing yang and promoting bowel movement[17]. Moxibustion is supposed to warm up and dredge the meridians and yang and reinforce qi by warm and heat stimulation from burning moxa wool. Wang LJ, *et al*[18], found out that grain-sized moxibustion plus acupuncture at Tianshu (ST 25), Qihai (CV 6) and Guanyuan (CV 4) could remarkably alleviate the clinical symptoms and QOL of the patients with chronic functional constipation, with its therapeutic effects obviously better than simple acupuncture group. As it is said in *Yi Fa Fang Yi Lun of Su Wen* (*Theory on Different Methods and Formulas of Essential Questions*) that distention will occur if organs with pathogenic cold, and the moxibustion should be used to treat. It has been found in the experiment that moxibustion can remarkably reduce the levels of serum nitric oxide, vasoactive intestinal peptide and nitric oxide synthase in the rats with functional constipation, and reduce the expression of vasoactive intestinal peptide protein. Besides, moxibustion can also regulate

the chronic wave frequency and amplitude of abnormal colon, so as to realize the goals to accelerate the transmitting functions of the colon for treating constipation[19-20].

Tianshu (ST 25), an acupoint of the Stomach Meridian of Foot Yangming, is the Front-Mu point of the Large Intestine, can be used to regulate qi flow of three jiao, raise the clear and descend the turbid and dredge the hollow organs. It has been found by study that Tianshu (ST 25) could remarkably improve the structure of the intestinal smooth muscles in STC rats and the pathological state of Cajal interstitial cells, so as to realize the goal to treat STC[21]. Zhongwan (CV 12), Qihai (CV 6) and Guanyuan (CV 4) belong to the acupoints of the Conception Vessel. Zhongwan (CV 12), an influential point of the hollow organs and also the Front-Mu point of the stomach, can be managed by warm moxibustion and bleeding method to realize the effects to warm up and disperse phlegm and dampness, regulate qi and remove fullness. Qihai (CV 6) and Guanyuan (CV 4) belong to healthcare and tonic acupoints. Qihai (CV 6) is an Yuan-Primary point of *Huang* (the region between the heart and the diaphragm), and Guanyuan (CV 4) is the Front-Mu point of the small intestine. The two acupoints in combination can warm up and reinforce the spleen and kidney, and assist primary yang. Huang Y, *et al*[22] found by the experiment that moxibustion at Tianshu (ST 25) and Qihai (CV 6) could remarkably reduce the sensitivity of the rat internal organs, and also could obviously improve the change of pain emotions like anxiety and depression in rats. Besides, moxibustion at Tianshu (ST 25) and Guanyuan (CV 4) could also remarkably improve the dominant microorganisms of the intestines[23].

In this study, the total effective rate was 92.3% in moxibustion at the abdominal acupoints plus routine nursing, obviously higher than that in the control group ($P<0.01$), and moxibustion at the abdominal acupoints plus routine nursing also remarkably decreased the scores of TCM symptoms of STC patients and increased the discharging rate of the colon markers, obviously better than the control group ($P<0.01$). Simultaneously, moxibustion at the abdominal acupoints plus routine nursing remarkably decreased the scores of SDA and SAS of STC patients ($P<0.01$). In comparison of SDS after the treatment between the two groups, the difference was statistically significant ($P<0.01$). In comparison of SAS after the treatment between the two groups, the difference was statistically significant ($P<0.05$). Besides, the satisfaction about nursing service was 96.2% after moxibustion at the abdominal acupoints plus routine nursing, obviously higher than that in the control group ($P<0.01$), and the recurrence rate of follow-up was 8.3%, remarkably lower than that in the control group ($P<0.01$).

In summary, moxibustion at the abdominal acupoints plus routine nursing can remarkably improve the colon transmission function and the anxiety and depression of STC patients, with remarkable clinical effects, higher clinical satisfaction and obviously low recurrence rate, and needs further promotion.

Conflict of Interest

The authors declared that there was no potential conflict of interest in this article.

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Statement of Informed Consent

Informed consent was obtained from all individual participants or their relatives in this study.

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