

# Clinical Nursing Intervention of Moxibustion on Abdominal Distension Symptoms in Heart Failure (Heart and Kidney Yang Deficiency and Blood Stasis Blocking Collaterals Syndrome)

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**Abstract:** *Objective:* To investigate the clinical nursing intervention effect of moxibustion on abdominal distension symptoms in heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome). *Methods:* 62 patients with heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome) admitted to our hospital from February 2023 to February 2024 were selected and divided into the observation group ( $n = 31$ ) and the control group ( $n = 31$ ) by using the random numerical table method. The control group adopted conventional nursing interventions, and the observation group received the nursing program of the control group with the addition of moxibustion nursing interventions. The nursing effectiveness, quality of life scores, and nursing satisfaction were compared between the two groups. *Results:* The nursing effectiveness of the observation group was significantly higher than the control group ( $P < 0.05$ ); the quality of life score of the observation group was significantly higher than the control group ( $P < 0.05$ ); the nursing satisfaction of the observation group was significantly higher than that of the control group ( $P < 0.05$ ). *Conclusion:* The use of moxibustion nursing intervention in patients with heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome) can effectively relieve the symptoms of abdominal distension, improve patients' quality of life, and increase nursing satisfaction, which has promotion and application values.

**Keywords:** Moxibustion; Heart failure; Heart and kidney yang deficiency and blood stasis blocking collaterals syndrome; Abdominal distension; Nursing intervention

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## 1. Introduction

The pathology of heart failure is characterized by the inability of the heart to pump blood normally and a significant reduction in cardiac output, which cannot meet the metabolic demands of the body's tissues and organs, thus triggering circulatory stasis in the tissues and organs<sup>[1]</sup>. Clinical studies have shown that heart failure can lead to liver and gastrointestinal stasis, seriously affecting the function of the gastrointestinal tract, and patients often experience abdominal distension<sup>[2]</sup>. Under conventional nursing, caregivers only take interventions such as condition observation,

medication guidance, and rehabilitation care, which cannot effectively relieve the symptoms. According to Chinese medicine theory, heart failure belongs to asthma, palpitation, edema, and phlegm retention, and the main evidence is heart and kidney yang deficiency and blood stasis blocking collaterals syndrome, which the method of strengthening the spleen and stomach can relieve the symptoms of abdominal distension<sup>[3]</sup>. Moxibustion is a characteristic nursing technique of Chinese medicine, which can warm the meridians and collaterals and regulate the function of internal organs. In this study, 62 patients with heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome) were sampled to explore the effect of moxibustion clinical nursing intervention.

## 2. General information and methods

### 2.1. General information

62 patients with heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome) admitted to our hospital from February 2023 to February 2024 were selected and randomly grouped into the observation group and the control group by random numerical table method, with 31 cases each. The ratio of male to female in the observation group was 18:13 and the maximum and minimum interval value of statistical age was 55–68 years with a mean value of  $61.58 \pm 4.77$  years. In the control group, the ratio of male to female was 19:12, and the maximum and minimum interval of statistical age was 57–66 years old, with a mean value of  $61.66 \pm 4.73$  years old, and there was no significant difference in the baseline data of the two groups ( $P > 0.05$ ).

Inclusion criteria: (1) Met the diagnostic criteria for heart failure in the 2022 AHA/ACC/HFSA Guidelines for the Management of Heart Failure. (2) According to the “Guidelines for Clinical Research on New Chinese Medicines for Heart Failure,” the Chinese medicine evidence was heart and kidney yang deficiency and blood stasis blocking collaterals syndrome. (3) Accompanied by symptoms of abdominal distension. (4) Signed the informed consent for the study.

Exclusion criteria: (1) Combined with other heart disease. (2) Combined with malignant tumors, infection, and other lesions. (3) Combined with mental and psychological diseases, unable to cooperate to complete the study.

### 2.2. Methods

The patients in the control group received conventional nursing interventions. Nurses instructed patients to rest in bed, monitored their vital signs, followed the doctor’s instructions to apply cardiogenic, diuretic, coronary artery expansion, and other medications, completed oxygen therapy, maintained acid-base and electrolyte balance, and other pharmacological interventions. Nurses explained the heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome) related knowledge, introduced the expected efficacy of therapeutic interventions, and provided psychological counseling for the patient. For the patient’s abdominal distension symptoms, nurses massaged the patient’s abdomen, instructed the patient to eat reasonably, notified the doctor if the relevant symptoms were not significantly improved, and cooperated with the doctor’s instructions.

The observation group adopted the nursing program of the control group and added moxibustion nursing intervention. Based on the theory of Chinese medicine acupuncture points and meridians, nurses selected bilateral Neiguan points and bilateral Zusanli points to implement moxibustion. Before carrying out moxibustion nursing care, nurses explained the operation process and precautions to patients, answered patients’ questions, and instructed patients to correctly cooperate with the completion of the operation. Nurses used a mild moxibustion care intervention plan. They ignited one end of the moxa stick and applied it to the skin tissue of the acupoint area, maintaining a distance of about 3 cm between the moxa stick and the skin. The procedure was done to produce a warm sensation in the local skin without causing a burning pain. Each acupoint was treated with moxibustion for 5 minutes, twice a day, for a total of 7 days. During the moxibustion process, nurses observed the patient’s reaction and stopped the moxibustion in a timely manner if there was burning pain on local skin or discomfort. After moxi-

bustion, the patient was covered with bedding, which was then removed after the perspiration subsided.

### 2.3. Evaluation criteria

- (1) After 7 days of nursing intervention, the nursing effectiveness of the two groups was evaluated; if the symptoms of abdominal distension disappeared and did not recur, it was significantly effective; if the symptoms of abdominal distension reduced, it was effective; if the symptoms of abdominal distension did not improve, it was ineffective, and total effectiveness = significantly effective + effective.
- (2) Evaluation of quality of life was carried out before nursing care and 7 days after nursing care. The scale used was SF-36, the evaluation items involved physical, physiological, emotional, and the evaluation of overall health, each item was scored from 0–100, and the score was positively correlated with quality of life.
- (3) After 7 days of nursing intervention, the nursing satisfaction of the two groups was counted using our self-made satisfaction questionnaire, answered with satisfaction and dissatisfaction, and the percentage of satisfied patients was the nursing satisfaction.

### 2.4. Statistical methods

SPSS23.0 software was used to analyze the research data, measurement data used mean  $\pm$  standard deviation (SD) and *t*-test, count data used % and  $\chi^2$  test,  $P < 0.05$  for statistically significant differences.

## 3. Results

### 3.1. Comparison of the nursing effectiveness of the two groups

As shown in **Table 1**, the nursing effectiveness of the observation group was significantly higher than the control group ( $P < 0.05$ ).

**Table 1.** Comparison of nursing effectiveness of the two groups [n (%)]

Groups	Significantly effective	Effective	Ineffective	Total effectiveness
Observation group ( $n = 31$ )	22	8	1	30 (96.8)
Control group ( $n = 31$ )	15	9	7	24 (77.4)
$\chi^2$	-	-	-	5.166
<i>P</i>	-	-	-	0.023

### 3.2. Comparison of the quality of life scores of the two groups

As presented in **Table 2**, the quality of life scores of patients in the observation group were significantly higher than those of the control group after nursing intervention ( $P < 0.05$ ).

**Table 2.** Comparison of the quality of life scores of the two groups (mean  $\pm$  SD)

Groups	Physical function		Physiological function		Emotional function		General health	
	Before nursing	After nursing	Before nursing	After nursing	Before nursing	After nursing	Before nursing	After nursing
Observation group ( $n = 31$ )	61.38 $\pm$ 4.27	80.62 $\pm$ 5.97	62.27 $\pm$ 3.86	81.92 $\pm$ 4.82	58.97 $\pm$ 3.12	77.95 $\pm$ 5.48	63.02 $\pm$ 3.95	82.26 $\pm$ 5.84
Control group ( $n = 31$ )	61.45 $\pm$ 4.19	72.05 $\pm$ 3.88	62.19 $\pm$ 3.94	73.35 $\pm$ 2.94	59.02 $\pm$ 3.06	68.27 $\pm$ 2.81	62.97 $\pm$ 4.01	74.12 $\pm$ 3.68
<i>t</i>	0.065	6.702	0.081	8.451	0.064	8.752	0.049	6.566
<i>P</i>	0.948	0.000	0.936	0.000	0.949	0.000	0.961	0.000

### 3.3. Comparison of nursing satisfaction of the two groups

As shown in **Table 3**, the nursing satisfaction of patients in the observation group was significantly higher than that of the control group ( $P < 0.05$ ).

**Table 3.** Comparison of nursing satisfaction of the two groups [n (%)]

Groups	Nursing operation	Nursing process	Service attitude
Observation group ( $n = 31$ )	30 (96.8)	29 (93.5)	29 (93.5)
Control group ( $n = 31$ )	24 (77.4)	22 (71.0)	23 (74.2)
$\chi^2$	5.166	5.415	4.292
$P$	0.023	0.019	0.038

## 4. Discussion

Relevant survey data show that the incidence of heart failure in the adult population in China is about 0.9%, of which the incidence in the elderly over 70 years old reaches more than 10%<sup>[4]</sup>. Heart failure mainly refers to the influence of a variety of factors leading to the weakening of the pumping function of the heart, cardiac blood output is reduced, unable to meet the basic needs of tissue and organ metabolism, and can induce circulatory stasis. Patients often present with symptoms such as dyspnea, fatigue, cough with phlegm, dizziness, and reduced exercise tolerance. Heart failure can lead to gastrointestinal congestion in patients, thereby triggering abdominal distension. Prolonged abdominal distension can affect normal eating and may induce abdominal pain, severe vomiting, and other digestive symptoms, impacting the patient's nutritional status. Therefore, appropriate nursing interventions should be taken early<sup>[5]</sup>.

In conventional nursing, nursing staff mainly take nursing measures such as condition observation, health education, and medication as prescribed by the doctor, and do not take targeted nursing measures to intervene in abdominal distension, resulting in patients' abdominal distension symptoms not effectively relieved. According to the theory of traditional Chinese medicine, heart failure belongs to palpitation, asthma, edema, heart and kidney yang deficiency, heart and spleen qi deficiency, and heart and lung qi deficiency, mainly due to heart and kidney yang deficiency and blood stasis blocking collaterals syndrome; the patient's qi and blood circulation are not smooth, yin and yang are imbalanced, and the spleen and stomach are out of harmony, leading to symptoms of abdominal distention. By regulating the function of the spleen, stomach, and internal organs, a plan to improve qi and blood circulation can effectively alleviate symptoms related to abdominal distention<sup>[6]</sup>. Moxibustion belongs to the characteristic nursing techniques of traditional Chinese medicine, during which moxa is ignited to stimulate local acupoints, which can dredge blocked meridians and collaterals, improve the regulation of qi and blood, alleviate gastrointestinal stasis, and smooth the body's qi, improve the meridians and qi and blood stagnation, and thus effectively improve abdominal distension<sup>[7]</sup>. Moxibustion nursing operation is simple, has no toxic side effects, and high patient tolerance, and its joint application with conventional nursing programs in patients with heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome) can effectively reduce abdominal distension and other symptoms.

The results of this study showed that the nursing effectiveness of the observation group was higher than that of the control group, suggesting that the use of moxibustion nursing intervention in patients with heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome) can effectively alleviate the symptoms of abdominal distension. This may be due to that in conventional nursing intervention programs, nursing staff did not target intervention of abdominal distension symptoms, only the implementation of medi-

cation, condition observation, and other basic measures, such as notifying the physician of patients with severe abdominal distension and cooperate with the treatment, thus the patient's abdominal distension symptoms cannot be effectively relieved. In the moxibustion nursing process, the nursing staff aimed to improve the patient's gastrointestinal function, and intervened in abdominal distension through the rational selection of acupuncture points and correct moxibustion operation.

According to Chinese medicine theory, the moxa used in moxibustion is warm, belonging to the pure yang class of drugs, its main effect is to dispel dampness and cold and warm the middle; the use of moxa combustion heat can warm the meridians and channels, regulating qi and blood, blood circulation, and blood stasis. In the moxibustion selection process, based on the patient's condition and the theory of Chinese medicine meridians, nursing staff select the Neiguan and Zusanli points. Neiguan is a major acupoint on the Pericardium Meridian of Hand-Jueyin, and applying moxibustion on this point can regulate gastrointestinal function, nourish the heart, and calm the mind. It can alleviate symptoms such as abdominal distension and pain, and assist in improving other symptoms of heart failure. Zusanli belongs to the important acupuncture points of the Stomach Meridian of Foot Yangming in traditional Chinese medicine. It is also considered a potent point for moxibustion therapy and a combination point of the Stomach Meridian. Moxibustion on this point can regulate spleen and stomach functions, nourishing the spleen and stomach, effectively alleviating symptoms such as abdominal distension and decreased appetite.<sup>[8]</sup> The nursing intervention of moxibustion can clear the disease mechanism of abdominal distension, and target to alleviate the symptoms of abdominal distension, and its effect is significantly better than a single conventional nursing program. The results of this study showed that the quality of life score of the observation group was higher than that of the control group after nursing intervention. The quality of life of patients with heart failure is correlated with the control of clinical symptoms, and the improvement of clinical symptoms is limited by the conventional nursing program, and the quality of life of patients cannot be improved because of their poor physical and mental state. The main role of moxibustion nursing intervention is to disperse stagnation, resolve stasis, warm the channels, dispel cold, reinforce yang and secure prolapse, and conduct heat outward. It can regulate the circulation of qi and blood, improve visceral function, restore the balance of yin and yang in the body, and alleviate abdominal distension symptoms while also improving heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome) while relieving the symptoms of bloating, and the nursing operation is safe and has no toxicity and side effects, which can assist in the control of the patient's disease progression and improve the patient's quality of life<sup>[9]</sup>. This study confirmed that the nursing satisfaction of patients in the observation group was higher than that of the control group, suggesting that the addition of moxibustion nursing to the conventional nursing program can significantly improve patients' satisfaction with nursing services. Analyzing the specific reasons, it can be seen that the main role of moxibustion care is to relieve symptoms such as abdominal distension, which can enhance the comfort of patients, avoid the recurrence of abdominal distension and other symptoms, and effectively control the progress of the disease. In the implementation of moxibustion nursing, the nursing staff takes the initiative to communicate with patients, explain the precautions of moxibustion nursing intervention, and standardize the completion of moxibustion-related operations, which can enhance the patient's satisfaction with nursing services<sup>[10]</sup>.

## 5. Conclusion

In conclusion, it can be seen that the use of moxibustion nursing intervention in patients with heart failure (heart and kidney yang deficiency and blood stasis blocking collaterals syndrome) can effectively relieve the symptoms of abdominal distension, improve the quality of life of the patients, enhance nursing satisfaction, and has promotion and application values.

## Disclosure statement

The author declares no conflict of interest.

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