

# Application Effect of Comprehensive Nursing Intervention on the Treatment of Inflammatory Bowel Disease Complicated with Hemorrhage by Digestive Endoscopy under Multi-slice Spiral CT Enterography

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**Objective.** To study the nursing effect of comprehensive nursing intervention on patients with inflammatory bowel disease (IBD) complicated with hemorrhage undergoing digestive endoscopy under multi-slice spiral CT enterography (MSCTE). **Methods.** The clinical data of 100 IBD patients complicated with hemorrhage undergoing digestive endoscopy under MSCTE in our hospital (February 2018-August 2019) were retrospectively analyzed. They were split into group X and group Y by coin throwing method, with 50 cases in each group. Group Y adopted routine nursing mode while group X adopted comprehensive nursing intervention to compare the nursing efficiency, nursing satisfaction, incidence of adverse reactions, VAS pain score, QLI (life quality) score and PSQI (sleep quality) score between the two groups. **Results.** The nursing efficiency and nursing satisfaction in group X were obviously higher compared with group Y. After nursing, the incidence of adverse reactions in group X was obviously lower compared with group Y, with a statistically significant difference. After nursing, the VAS pain score in group X was obviously lower compared with group Y. After nursing, the QLI score in group X was obviously higher compared with group Y. After nursing, the PSQI in group X was obviously lower compared with group Y. **Conclusion.** Comprehensive nursing intervention is able to obviously improve nursing efficiency and nursing satisfaction, obviously reduce the possibility of adverse reactions in the nursing process, and improve the life quality score, sleep quality score and pain score, which has high application value in IBD patients complicated with hemorrhage treated by digestive endoscopy under MSCTE.

**Keywords:** comprehensive nursing, multi-slice spiral CT (MSCT), enterography, digestive endoscopy, inflammatory bowel disease

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Angiography is a common examination method in clinical practice, especially for cardiovascular and cerebrovascular diseases and digestive system diseases. Due to the inflammatory manifestations in patients, inflammatory bowel disease (IBD) can affect the normal work of the intestine, mainly including ulcerative colitis<sup>[1-3]</sup>. It has been reported that IBD may be associated with the decline of immune function, genetic factors, dietetic hygiene, intestinal bacterial overgrowth and environmental factors. IBD is a common clinical intestinal disease which is often treated with digestive endoscopy under angiography. In addition, CT technology has become the main diagnostic technology of IBD<sup>[4-6]</sup>. Multi-slice spiral CT enterography (MSCTE) is used to obtain the detection results of multi-slice CT images of the small intestine by scanning the abdomen of patients, which is non-invasive and painless, with high diagnostic efficiency, high accuracy, and wide application in clinical practice. Since IBD patients need intensive nursing after digestive endoscopy treatment, improvement and optimization of hospital nursing work is also an effective way to improve the prognosis and therapeutic effect<sup>[7-9]</sup>. In order to study the more appropriate nursing

intervention mode for IBD patients complicated with hemorrhage undergoing digestive endoscopy under MSCTE, this paper took IBD patients complicated with hemorrhage treated by digestive endoscopy under MSCTE as the research object, and implemented different nursing intervention modes for patients. Group X adopted comprehensive nursing intervention while group Y adopted routine nursing mode to compare the nursing efficiency, nursing satisfaction, adverse reactions, sleep quality score, life quality score and pain score between the two groups.

## MATERIALS AND METHODS

### General Information

The clinical data of 100 IBD patients complicated with hemorrhage undergoing digestive endoscopy under MSCTE in our hospital (February 2018-August 2019) were retrospectively analyzed. They were split into group Y and group X by coin throwing method, with 50 cases in each group. Patients in group X were aged 36-66 years old and those in group Y were aged 40-65 years old. No significant difference in gender, age and course of disease was found between the two groups ( $P>0.05$ ), as shown in the following table.

Table 1.  
Comparison of general data ( $\bar{x} \pm s$ )

Group	Group X	Group Y	t/X <sup>2</sup>	P
Gender (male/female)	23/27	26/24	0.36	0.55
Age (years old)	45.16±6.92	45.00±6.38	0.12	0.90
Height(cm)	168.67±10.55	168.98±10.07	0.15	0.88
Weight(kg)	66.11±5.26	65.96±5.88	0.13	0.89
Course of disease(months)	4.20±3.31	4.16±3.04	0.06	0.95
Smoking history (years)	6.71±1.66	6.80±1.68	0.27	0.79
Drinking history (years)	10.20±3.21	10.08±3.06	0.19	0.85
Diabetes mellitus(n)	6	5	0.10	0.75
Hypertension(n)	12	15	0.46	0.50
Hyperlipemia(n)	5	4	0.12	0.73

### Inclusion/Exclusion Criteria

#### Inclusion criteria

- (1) It met the clinical manifestations of IBD complicated with hemorrhage;
- (2) The patients were no less than 18 years old;

- (3) The patients had no other organic diseases;

- (4) The patients had no history of drug allergy, drug abuse or bad habits;

- (5) The study obtained approval of the hospital ethics committee, and all patients

voluntarily participated in the study and signed the informed consent.

### Exclusion criteria

(1) The patients had other digestive system diseases;

(2) The patients recently received surgical treatment, or used anesthetic drugs;

(3) The patients had other congenital diseases.

### Methods

Both groups received digestive endoscopy under MSCTE, and different nursing modes were performed after treatment.

Group Y adopted routine nursing mode. The nursing staff detected vital signs of the patients on time, and monitored the body temperature, blood pressure and other indicators of the patients. Since the patients might have nausea and vomiting after digestive endoscopy treatment, the staff should pay attention to the condition of the patients after treatment and provide relevant drug treatment if necessary.

Group X adopted comprehensive nursing intervention. The nursing staff provided physiological and psychological nursing for the patients. If the patients showed silence, depression and other emotions, psychological counseling should be carried out in time, and the communication with the patients or their families should be strengthened to facilitate timely understanding of the psychological situation of the patients. Besides, attention was paid to the prognosis of patients. The staff made ward rounds or visits at least two times a day, mainly asking if the patients had abnormal conditions, monitoring their blood pressure and body temperature, and asking them about their defecation and urination.

### Observation Indexes

The nursing efficiency, nursing satisfaction, incidence of adverse reactions, VAS pain score, QLI (life quality) score and PSQI (sleep quality) score were compared.

The patients had no adverse reaction during

nursing, with excellent effect after intervention, and the clinical manifestations basically disappeared, which was markedly effective. Patients had mild adverse reactions, with good effect after intervention, and the clinical manifestations were significantly relieved, which was effective. Patients had severe adverse reactions, and the clinical manifestations were not relieved or even worse, which be ineffective.

The VAS pain scale was applied to score the postoperative pain of both groups, with 0 as no pain, 1-3 points as mild but tolerable pain; 4-6 points as tolerable pain that affected sleep, and 7-10 points as severe and unbearable pain. 2-3 points indicated good analgesia and a score above 3 points indicated incomplete analgesia [10-12].

QLI (life quality) scoring criteria included daily activities, work and life, and interpersonal relationship. A higher score represented better life quality.

The score of PSQI (sleep quality index) was 0-21 points, and a higher score represented worse sleep quality.

### Statistical Treatment

In this study, SPSS20.0 was selected as the data processing software, and GraphPad Prism 7 (GraphPad Software, San Diego, USA) was used to draw pictures of the data. The study included count data and measurement data. The measurement data were measured by t test, expressed by ( $\bar{x} \pm s$ ), and the count data were tested by  $\chi^2$ , expressed by [n(%)]. The difference was statistically significant when  $p < 0.05$ .

## RESULTS

### Comparison of Nursing Efficiency

The nursing efficiency of patients with different nursing intervention modes was compared. The results showed that the nursing efficiency in group X (94%) was obviously higher compared with group Y ( $P < 0.05$ ; Table 2).

Table 2.  
Comparison of nursing efficiency

Group	Markedly effective	Effective	Ineffective	Total efficiency rate (%)
Group X	34	13	3	94%
Group Y	11	27	12	76%
$\chi^2$				6.35

P	0.01
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**Comparison of Nursing Satisfaction**

The nursing satisfaction of patients was compared. The results showed that the nursing

satisfaction in group X was obviously higher compared with group Y ( $P < 0.05$ ; Table 3).

Table 3.

Comparison of nursing satisfaction

Group	Fully satisfied	Satisfied	Dissatisfied	Total satisfaction (%)
Group X	39	11	0	100%
Group Y	14	25	11	78%
$\chi^2$				12.36
P				<0.001

**Comparison of the Incidence of Adverse Reactions**

Adverse reactions occurred during nursing mainly included nausea and vomiting,

constipation and severe pain. The comparison showed that the incidence of adverse reactions in group X was obviously lower compared with group Y ( $P < 0.05$ ; Table 4).

Table 4.

Comparison of the incidence of adverse reactions

Group	Nausea and vomiting	Constipation	Severe pain	Total incidence (%)
Group X	3	3	1	14%
Group Y	9	13	2	48%
$\chi^2$				9.16
P				0.002

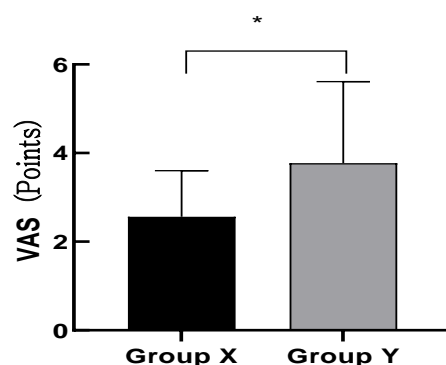
**Comparison of VAS Pain Scores**

Comparison of VAS pain scores showed that the VAS pain score in group X was obviously

lower compared with group Y ( $P < 0.05$ ; Figure 1).

Figure 1.

### Comparison of VAS pain scores



Note: The abscissa from left to right represents group X and group Y, and the ordinate represents the VAS pain score.

\* indicated the comparison of VAS pain scores between group X ( $2.56 \pm 1.04$ ) and group Y ( $3.77 \pm 1.84$ ),  $t=4.05$ ,  $P<0.001$ .

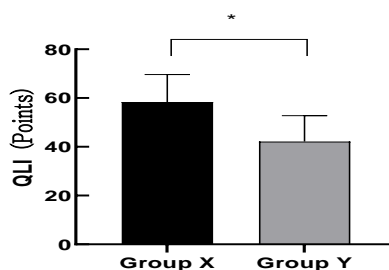
### Comparison Of Qli Scores

Comparison of QLI scores between the two groups showed that the QLI score in group X

after nursing was obviously higher compared with group Y ( $P<0.05$ ; Figure 2).

Figure 2.

### Comparison of QLI scores



Note: The abscissa from left to right represents group X and group Y, and the ordinate represents the QLI score.

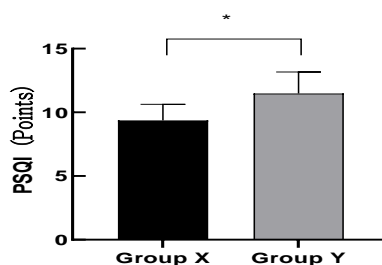
\* indicated the comparison of QLI scores between group X ( $58.37 \pm 11.25$ ) and group Y ( $42.19 \pm 10.55$ ),  $t=7.42$ ,  $P<0.001$ .

### Comparison of PSQI Scores

Comparison of PSQI scores showed that the

PSQI score in group X was obviously lower compared with group Y, ( $P<0.05$ ; Figure 3).

**Figure 3.**  
**Comparison of PSQI scores**



Note: The abscissa from left to right represents group X and group Y, and the ordinate represents the PSQI score.

\* indicated the comparison of PSQI scores between group X ( $9.37 \pm 1.26$ ) and group Y ( $11.48 \pm 1.69$ ),  $t=7.08$ ,  $P<0.001$ .

## DISCUSSION

Hospitals are integrated service institutions, which has a service system facing the public. In hospitals, medical staff and patients are the two most important components. The nursing work, as one of the most past in hospital work, is the bridge between hospital and patients. Most of the disease manifestations of IBD are related to the digestive system, with inflammatory manifestations in patients' body. If IBD is not treated in time, the patients' condition may be delayed, resulting in aggravation of the disease and increased possibility of cancer<sup>[13-15]</sup>. In addition, the small intestine plays a very important part in human life activities and is an indispensable factor in the digestive system. However, diagnosis and treatment of lesions in the small intestine are more complex due to the special arrangement of human small intestine<sup>[16-18]</sup>. MSCTE is a common method in the treatment of intestinal diseases, especially in IBD patients complicated with hemorrhage. Since the patients need intensive nursing after treatment, the nursing work after treatment is also one of the factors affecting the prognosis. Comprehensive nursing intervention is a way of comprehensive physical and mental nursing for patients, which is a common nursing method in clinic to promote the rehabilitation of patients by psychological counseling combined with physiological nursing<sup>[19-22]</sup>. To study application of comprehensive nursing intervention in IBD patients complicated with hemorrhage treated by digestive endoscopy under MSCTE, this paper took the patients as the research objects

and adopted different nursing methods to compare the nursing efficiency, nursing satisfaction, adverse reactions, QLI score, PSQI score and VAS pain score of patients with different nursing modes.

The results showed that the nursing efficiency and nursing satisfaction in group X were obviously higher compared with group Y, indicating that comprehensive nursing intervention can obviously facilitate the nursing efficiency and nursing satisfaction, and thereby improving the prognosis. The incidence of adverse reactions in group X was obviously lower compared with group Y. In addition, the QLI score in group X was obviously higher compared with group Y, suggesting that comprehensive nursing intervention obviously improves the life quality and psychological state. The PSQI score and VAS pain score in group X were obviously lower compared with group Y. Since PSQI score and VAS pain score indicate better sleep quality and less pain, the result demonstrates that the sleep quality was enhanced and the pain was alleviated in group X with comprehensive nursing intervention. Wang Man<sup>[23]</sup> has proposed in the study that comprehensive nursing intervention obviously improves psychological state and life quality of IBD patients complicated with hemorrhage, and effectively enhances the nursing efficiency, which is similar to the conclusion of this study and fully proves the scientific and reliable results of this study<sup>[24]</sup>.

In conclusion, comprehensive nursing intervention can obviously improve nursing efficiency and nursing satisfaction, reduce

possibility of adverse reactions in the nursing process, and improve the life quality score, sleep quality score and pain score, which has high application value in IBD patients complicated with hemorrhage treated by digestive endoscopy under MSCTE, deserving promotion and application in clinic.

## DECLARATION OF CONFLICTING INTERESTS

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