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Research Article

The Effect and Nursing of Indwelling Nasal Jejunal Feeding Tube for Enteral Nutrition in Acute Severe Pancreatitis

Xiaoqin Zhu, Zhaolin Chen*

The First Affiliated Hospital of Jinnan University, Guangzhou 510000, Guangdong Province, China

Abstract: ***Objective:*** To analyze the effect of enteral nutrition and nursing intervention in patients with indwelling nasojejunal tube in acute severe pancreatitis. ***Methods:*** Sixty cases of patients with indwelt nasojejunal tubes treated in our hospital from August 2019 to August 2020 were divided into routine group and observation group as research subjects. Patients in both groups received enteral nutrition, patients in the routine group received routine care, and patients in the observation group received quality care. The recovery time of gastrointestinal function, length of hospital stay, hospitalization cost, nutritional indicators and incidence of complications in the two groups were compared. ***Results:*** The recovery time of gastrointestinal function in observation group was lower than that in routine group, $P<0.05$; The length and cost of hospitalization in observation group were lower than those in routine group, $P<0.05$; The nutritional indexes in observation group were higher than those in routine group, $P<0.05$; The incidence of complications in observation group was lower than that in routine group, $P<0.05$. ***Conclusion:*** Quality nursing service improve the effect of enteral nutrition, so as to ensure that patients get sufficient nutritional support. Its effect is remarkable and it is worthy of widespread clinical application.

Keywords: Acute severe pancreatitis; To indwell the nasojejunal tube; Enteral nutrition; Effect; Nursing.

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****Corresponding author:*** Zhaolin Chen, zhuw08q5@163.com

Acute severe pancreatitis is a kind of severe acute abdominal disease, which is relatively common in internal medicine department. If patients do not receive timely and effective treatment, they are prone to appearing a variety of complications, and even lead to death in serious cases, which poses a great threat to the physical and mental health and quality of life of patients[1]. Enteral nutrition support therapy can effectively improve the prognosis of patients, but it is prone to complications, so it is necessary to take high-quality nursing intervention. The research objects of this paper were 60 patients with indwelling nasojejunal tube in acute severe pancreatitis, all of whom were admitted to our hospital during August 2019 to August 2020, so as to study and analyze the application value of enteral nutrition in patients with indwelling nasojejunal tube in acute severe pancreatitis. The results are reported as follows.

1 Materials and methods

1.1 Basic materials

A total of 60 patients with indwelt nasojejunal tubes for acute severe pancreatitis treated in our hospital were selected as the research subjects, all of whom were admitted from August 2019 to August 2020 and were divided into the routine group and the observation group. Among them, 30 patients in the routine group were aged 20-69 years, with an average age of (51.25±1.57) years; Observation group included 30 patients, aged 21-68 years, with an average age of (51.63±1.42) years. The research has been hospital ethics committee approval. Data comparison between groups, $P > 0.05$.

1.2 Implementation method

Patients in both groups received conventional treatment, including fasting, anti-infection, and

correction of water and electrolyte balance disorders, etc. After the recovery of gastrointestinal function, the patient was given enteral nutrition intervention, and the nasointestinal tube was placed 3-10 days after admission by blind vision method. Meanwhile, the success of catheterization was observed by abdominal X-ray film. If the blind catheterization failed, then the catheterization was guided by gastroscope. After that, routine group patients received routine nursing care, including infusion speed control, flushing through warm water after infusion and so on. The observation group patients received high quality nursing, the methods were as follows.

(1)To estalish a nursing team. And the members of the team are required to have at least 3 years of nursing work experience. At the same time, the team members should be regularly trained and evaluated, so that the nursing staff can distinctly grasp the causes and treatment methods of a range of complications. Once the assessment is unqualified, the team members are not allowed to participate in the nursing work[2].

(2) Nursing staff should carry out health education to patients, so that patients can clearly comprehend the information related to their disease. Meanwhile, they should try their best to eliminate patients' doubts. In this way, patients can maintain a good state of mind to receive medical nursing, which helps to speed up the recovery .

(3)To periodically check the patient's nasointestinal tube, in order to ensure the correct position and patency of the patient's nasointestinal tube. And the nasointestinal tube should be disinfected and flushed with warm water after each delivery of nutrient solution.

(4)After diagnosis of acute severe pancreatitis patients, urine volume and fluid resuscitation should be performed within 6 hours. Critically, sufficient fluid ought to be rehydration immediately after central venous catheterization. If patients with albumin level was detected in the presence of significantly lower, the nurses should immediately infusion in patients with blood plasma and albumin.

(5)The nursing staff performed enteral nutrition support therapy by injecting raw rhubarb extract and warm water, and on the second day, nutritional solution was injected into the patient. The initial drip rate of nutrient solution is 25ml/h and 200ml/d, and the drip rate can be increased to 100ml/h and 500ml/d after the patient gradually gets used to it. This measure is conducive to the patient's intestines and stomach to get a certain period of recovery, and meanwhile to obtain constant input[3].

1.3 Obvervational indexes

The recovery time of gastrointestinal function (including exhaust time, relief time of abdominal pain, and relief time of abdominal distention), length of hospital stay, hospital expenses, nutritional indicators (including total protein, serum albumin, serum pre-albumin, hemoglobin), and incidence of complications (including tube obstruction, diarrhea, accidental extubation, aspiration pneumonia, and skin pressure sores at the edge of nostril) were compared between the two groups.

1.4 Statistical method

Statistical software SPSS20.0 was used to analyze and process the relevant data of patients. Count data were expressed by rate (%) and tested by χ^2. The measurement was expressed by ($\bar{x} \pm s$) and tested by T. When P<0.05, the difference was statistically significant.

2 Results

2.1 Comparison of the recovery time of gastrointestinal function between the two groups

There were differences in pairwise comparison, and the recovery time of gastrointestinal function in the observation group was lower than that in the routine group, P<0.05, as shown in Table 1.

Table 1. Comparison of recovery time of gastrointestinal function between the two groups ($\bar{x} \pm s$)

Group	Exhaust time (d)	The relief time of abdominal pain (d)	The relief time of abdominal distention (d)
Observation group (30 cases)	4.25±1.13	3.78±0.92	2.73±0.85
Routine group (30 cases)	5.54±1.36	4.97±1.38	4.05±0.96
P	<0.05	<0.05	<0.05

2.2 Comparison of hospitalization time and hospitalization cost between two groups

The hospitalization time and hospitalization cost were different in pairwise comparison, and patients in the observation group were lower than those in the routine group, $P<0.05$, as shown in Table 2.

Table 2. Comparison of hospitalization time and hospitalization cost between two groups ($\bar{x} \pm s$)

Group	Hospitalization time (d)	Hospitalization cost (yuan)
Observation group (30 cases)	21.85±1.25	25976.34±254.83
Routine group (30 cases)	32.26±1.56	35971.96±285.84
P	<0.05	<0.05

2.3 Comparison of nutritional indicators between the two groups

There were differences in pairwise comparison, and the nutritional indicators in the observation group were all higher than those in the routine group, $P<0.05$, as shown in Table 3.

Table 3. Comparison of nutritional indicators between the two groups

Group	Total protein (g/L)	Serum albumin(g/L)	Serum pre-albumin(mg/L)	Hemoglobin(g/L)
Observation group (30 cases)	61.48±8.55	35.89±5.36	254.01±42.65	133.15±8.67
Routine group (30 cases)	51.24±9.36	29.14±4.77	216.34±43.18	109.84±9.43
P	--	--	--	<0.05

2.4 Comparison of the incidence of complications between the two groups

There were differences in pairwise comparison, and the incidence of complications in the observation group were lower than those in the routine group, $P<0.05$, as shown in Table 4.

Table 4. Comparative analysis of patients' nursing satisfaction N (%)

Group	Tube obstruction	Diarrhea	Accidental extubation	Aspiration pneumonia	Skin pressure sores at the edge of nostril
Observation group (30 cases)	1 (3.33)	1 (3.33)	0 (0)	0 (0)	0 (0)
Routine group (30 cases)	8 (26.67)	10 (33.33)	4 (13.33)	5 (16.67)	4 (13.33)
P	<0.05	<0.05	<0.05	<0.05	<0.05

3 Discussion

Acute severe pancreatitis is relatively common in clinical practice, and enteral nutrition support is a significant method to treat this disease, which can not only enhance the patient's physical fitness, but also strengthen the immunity of patients, which plays a key role in the improvement of patients' physical condition after surgery. Nevertheless, this method is prone to a variety of complications and affecting the treatment of patients, so it is particularly critical to take effective nursing measures to intervene patients' condition[4]. In this research, the recovery time of gastrointestinal function, length of hospital stay, cost of hospitalization, nutritional indexes and incidence of complications in the observation group were significantly better than those in the routine group ($P<0.05$). The results fully indicate that high quality nursing improve the nutritional status of patients and enhance the effect of enteral nutrition. The reason for the analysis is that quality nursing focuses on training and assessment of nursing staffs, so that nursing staffs are able to fully master the relevant know-how and nursing guidelines of enteral nutrition, and distinctly grasp the related causes of complications of enteral nutrition. After passing the assessment, the nursing staff has the ability to make targeted nursing plan according to the actual situation of the patient. Therefore, nursing staff in the process of clinical nursing work, through the dynamic observation of patients, is capable to handle the current risk factors of patients, and then take appropriate measures to intervene, or prevent the occurrence of potential risk factors with the aid of nursing means, including naso-intestinal tube management, naso-intestinal tube selection, enteral nutrition selection, etc[5]. It is obvious that such nursing method has shown excellent adjuvant treatment effect. Through the improvement of nutritional indicators and the reduction of the incidence of complications, the method reduced the length of hospital stay and the hospitalization cost of

patients. It undoubtedly has a positive impact on the early recovery of patients.

In conclusion, high quality nursing enhance the effect of enteral nutrition, not only accelerate the recovery of gastrointestinal function, but also reduce the risk of complications in patients, so that patients obtain adequate nutritional support, which is beneficial for the prognosis and recovery of patients.

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