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The Impact of Combined Health Education and Dietary Guidance on the Speed of Postoperative Recovery in Patients with Gastrointestinal Polyps

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Abstract: This study aims to explore the impact of combined health education and dietary guidance on the speed of postoperative recovery in patients with gastrointestinal polyps. A specific number of patients who underwent gastrointestinal polyp resection were selected and randomly divided into a control group and an experimental group. The control group received routine nursing, while the experimental group implemented combined health education and dietary guidance on this basis. By comparing the recovery indicators of the two groups, it was found that the recovery speed of the experimental group was significantly faster than that of the control group, indicating that this combined intervention method can effectively promote patient recovery.

Keywords: Health education; Dietary guidance; Postoperative gastrointestinal polyps; Recovery speed

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1. Introduction

Gastrointestinal polyps are common lesions of the digestive system. The quality of postoperative recovery in patients after endoscopic resection is directly related to long-term prognosis and quality of life. Traditional nursing models mostly focus on symptom control and complication prevention, but often ignore the profound impact of patients' subjective initiative and lifestyle intervention on the recovery process. Health education can significantly improve patients' compliance with postoperative management plans through systematic knowledge transmission; individualized dietary guidance can accurately regulate nutrient intake and provide metabolic support for tissue repair. The synergistic effect of the two not only conforms to the modern medical model of "biological-psychological-social" but also is highly consistent with the concept of Enhanced Recovery After Surgery (ERAS). This study takes patients after gastrointestinal polyp resection as the research object, explores the quantitative impact of combined health education and dietary guidance on recovery speed, aiming to provide evidence-

based basis for optimizing perioperative management strategies, shortening hospital stay, and improving patient prognosis, making the research content more referential [1].

2. Materials and methods

2.1. General information

A total of 120 patients who underwent gastrointestinal polyp resection in our hospital from January 2024 to December 2024 were selected as the research objects.

2.1.1. Inclusion criteria

Diagnosed with gastrointestinal polyps by pathological examination and underwent surgical treatment; aged between 18–75 years old; conscious and able to communicate normally; the study has obtained the consent of patients and their families, and informed consent forms have been signed.

2.1.2. Exclusion criteria

Having other major diseases affecting the operation; Allergic to relevant drugs; Unable to cooperate with dietary standards; Undergoing multiple mutually exclusive surgeries [2].

2.1.3. Study design

Patients were divided into a control group and an experimental group according to different ages, with 60 patients in each group. Among them, the control group included 34 males and 16 females, with an age range of (45.2 ± 10.5) years and a polyp diameter of (5.8 ± 2.1) mm; the experimental group included 30 males and 30 females, with an age range of (44.8 ± 11.2) years and a polyp diameter of (5.5 ± 2.3) mm. The control group and the experimental group were compared in the above dimensions to comprehensively understand and better grasp the research situation [3].

2.2. Research methods

2.2.1. Control group

Received routine care, including monitoring patients' recovery and wound conditions after surgery, administering drug treatment as prescribed by doctors, and guiding patients to rest and exercise reasonably [4].

2.2.2. Experimental group

In addition to the routine care of the control group, combined health education and dietary guidance were implemented.

(1) Health education

Admission education: Nurses should introduce the hospital environment, attending doctors, and managing nurses to patients admitted to the hospital, so that patients can better integrate into the hospital and adapt to the hospital environment as soon as possible. Disease knowledge education: Through distributing publicity brochures, holding health lectures, and one-on-one explanations, patients and their families are detailly informed about the causes of gastrointestinal polyps, treatment methods, preoperative diet, postoperative management methods, and relevant prevention and treatment measures, so that patients and their families

can have a deeper understanding of gastrointestinal polyps. Postoperative rehabilitation education: Explain to patients the importance of postoperative rehabilitation and precautions, such as precautions for postoperative activities. Focus on rest within 1–2 days after surgery, avoid prolonged walking, straining during defecation, and lifting heavy objects, and avoid strenuous exercise within a week. At the same time, inform patients to promptly inform medical staff if abnormal conditions such as abdominal pain, bloating, and hematochezia occur [5]. Psychological education: Patients after gastrointestinal polyp surgery often have varying degrees of anxiety, fear, and other psychological problems, that is, worrying about their future conditions [6]. Hospital staff should communicate with patients and their families according to different situations of patients. This can not only reduce patients' tension but also enable patients' families to better comfort patients' anxiety, thereby better ensuring the conditions before, during, and after surgery. Patients are more willing to receive physical and psychological treatment, so as to overcome the disease with a positive attitude [7].

(2) Dietary guidance

Early postoperative period (1–3 days after surgery): Patients' gastrointestinal function has not yet fully recovered. At this time, fasting or warm liquid food such as rice soup, vegetable soup, and fruit juice should be given. Avoid gas-producing foods such as milk and soybean milk to prevent bloating. Do not eat too much at one time; follow the principle of small and frequent meals, with 5–6 meals a day [8]. Mid-postoperative period (4–7 days after surgery): With the gradual recovery of gastrointestinal function, patients can gradually transition to semi-liquid food such as porridge, noodles, and wontons. The food should be light, easy to digest, and rich in protein and vitamins, such as lean meat porridge, egg custard, and vegetable puree. At the same time, pay attention to the appropriate temperature of food to avoid cold or overheated food stimulating the gastrointestinal tract. Late postoperative period (more than 1 week after surgery): Patients' gastrointestinal function has basically recovered to normal, and they can gradually resume a normal diet. However, they should also eat according to the proportion of protein and vegetables provided by doctors to better promote the gastrointestinal tract to develop in a healthy direction. Spicy, greasy, and irritating foods should not be eaten, and smoking and drinking should be quit to reduce stimulation to the gastrointestinal tract [9].

2.3. Observation indicators

2.3.1. Recovery speed indicators

(1) First defecation time

Record the time of the first defecation of patients in both groups after surgery, in hours.

(2) Hospital stays

The time from patients' admission for surgical treatment to discharge, in days.

(3) Complication occurrence

Observe and record the conditions of the control group and the experimental group, such as physical conditions, bleeding, abdominal pain, bloating, etc., and calculate the complication rate.

2.3.2. Patient satisfaction

The hospital can use questionnaires to investigate patients' satisfaction with doctors' services, health education, postoperative education, psychological education, etc., with a full score of 100 points. According to the satisfaction

level, it is divided into four grades: Very satisfied (above 95 points), Satisfied (85–94 points), Average (60–84 points), and Dissatisfied (below 60 points). Final satisfaction rate = (number of very satisfied patients + number of satisfied patients) / total number of patients × 100%.

2.4. Statistical methods

SPSS 25.0 statistical software was used for data analysis. Measurement data were expressed as mean ± standard deviation ($\bar{x} \pm s$), and independent sample *t*-test was used for inter-group comparison; count data were expressed as rate (%), and χ^2 test was used for inter-group comparison. $p < 0.05$ was considered statistically significant.

3. Results

3.1. Comparison of recovery speed indicators between the two groups

The first defecation time of patients in the experimental group was shorter than that in the control group, and the hospital stay was also less than that in the control group, with statistically significant differences ($p < 0.05$).

Specific data are as follows: The first defecation time of the experimental group was (32.8 ± 5.6) h, and that of the control group was (45.2 ± 6.3) h; the hospital stay of the experimental group was (4.2 ± 1.2) d, and that of the control group was (6.8 ± 1.5) d [10].

3.2. Comparison of complication occurrence between the two groups

The complication rate of the experimental group was 8.33% (5/60), and that of the control group was 23.33% (14/60). The complication rate of the experimental group was significantly lower than that of the control group, with a statistically significant difference ($p < 0.05$). Among them, there was 1 case of fever, 1 case of bleeding, 2 cases of abdominal pain, and 1 case of bloating in the experimental group; 4 cases of fever, 3 cases of bleeding, 4 cases of abdominal pain, and 3 cases of bloating in the control group [11].

3.3. Comparison of patient satisfaction between the two groups

The patient satisfaction rate of the experimental group was 91.67% (55/60), and that of the control group was 73.33% (44/60). The patient satisfaction rate of the experimental group was significantly higher than that of the control group, with a statistically significant difference ($p < 0.05$). In the experimental group, 32 cases were very satisfied, 23 cases were satisfied, 3 cases were average, and 2 cases were dissatisfied; in the control group, 14 cases were very satisfied, 30 cases were satisfied, 11 cases were average, and 5 cases were dissatisfied [12].

3.4. Comparison of recovery effects in patients with different polyp diameters

Patients in both groups were divided into three groups according to polyp diameter: ≤ 3 mm, 4–7 mm, and > 8 mm. The recovery speed indicators of the experimental group and the control group within each diameter group were compared respectively. The results showed that in each diameter group, the recovery status of the experimental group was faster than that of the control group, with statistically significant differences ($p < 0.05$). Specific data are as follows:

(1) ≤ 3 mm group

The first defecation time of the experimental group was (30.5 ± 5.2) h, and that of the control group was (42.8 ± 5.9) h; the hospital stay of the experimental group was (4.8 ± 1.0) d, and that of the control group

was (7.2 ± 1.3) d.

(2) 4–7 mm group

The first defecation time of the experimental group was (34.2 ± 6.0) h, and that of the control group was (46.5 ± 6.7) h; the hospital stay of the experimental group was (5.4 ± 1.3) d, and that of the control group was (8.0 ± 1.6) d.

(3) 8 mm group

The first defecation time of the experimental group was (35.6 ± 6.4) h, and that of the control group was (48.2 ± 7.1) h; the hospital stay of the experimental group was (5.8 ± 1.5) d, and that of the control group was (8.5 ± 1.8) d.

This indicates that combined health education and dietary guidance can promote the recovery of patients after gastrointestinal polyp surgery with different polyp diameters.

4. Discussion

4.1. The impact of health education on the postoperative recovery of patients with gastrointestinal polyps

Through comprehensive and systematic health education, patients can deeply understand the relevant knowledge of gastrointestinal polyps, including the etiology, treatment methods, and postoperative precautions, thereby improving their understanding of the disease and self-management ability [13]. In terms of disease knowledge education, patients learn that the formation of gastrointestinal polyps is related to poor work and rest habits, and they need to adjust their lifestyle after surgery to prevent disease recurrence [14]. This in-depth understanding of the disease helps patients better cooperate with doctors and nurses, thereby comprehensively improving the speed of recovery.

4.2. The impact of dietary guidance on the postoperative recovery of patients with gastrointestinal polyps

Patients' gastrointestinal function varies in different stages after surgery. For example, in the early postoperative period, patients should eat liquid food to reduce intestinal burden and facilitate intestinal recovery; in the mid-postoperative period, they can eat semi-liquid food to promote wound healing faster; in the late postoperative period, they can eat with nutritional matching, which not only ensures a certain nutritional intake for patients but also enables patients to recover health faster [15].

5. Conclusion

Health education and dietary guidance, as the "dual engines" for postoperative recovery of gastrointestinal polyps, their synergistic effect significantly accelerates the patient's recovery process. Through systematic health education, patients can clearly grasp postoperative taboos, early warning signals of complications, and the importance of follow-up visits, such as avoiding strenuous exercise too early and promptly identifying abnormal symptoms such as hematochezia; scientific dietary guidance, through a stepwise transition plan, from liquid food to semi-liquid food and then to soft food, combined with individualized nutritional supplements, effectively reduces gastrointestinal burden, promotes wound healing, better helps patients recover to a healthy level, and

makes patients healthy individuals.

Disclosure statement

The author declares no conflict of interest.

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