

HEMORRHAGE PEPTIC ULCER PATIENTS' KNOWLEDGE OF RECURRENCE PREVENTION AT 354 MILITARY HOSPITAL IN 2022

Pham Thi Thu Huong¹, Do Duc Quan², Nguyen Ba Tam¹, Ngo Thi Huyen³
¹Phenikaa University; ²354 Military Hospital; ³Dai Nam University

ABSTRACT

Objectives: To describe the knowledge of recurrence prevention and to find the factors affecting the knowledge of recurrence prevention among patients with gastrointestinal bleeding due to peptic ulcer. **Subjects and methods:** a descriptive study was conducted on 128 patients who were diagnosed with gastrointestinal bleeding caused by peptic ulcer and were inpatients at the Department of Gastroenterology - Blood Diseases, 354 Military Hospital 354 from March to August 2021. The questionnaire which was developed by Nguyen Huyen Trang was used to interview patients. **Results:** The patients' general knowledge score of recurrence prevention was 23.56 ± 6.40 . The total score of knowledge of recurrence prevention was quite good 23.56 ± 6.40 . The score of knowledge of the disease was 5.58 ± 2.01 ; The percentage of patients with correct knowledge about the content of relapse prevention was different such as diet (85.94%), coffee use (59.37%), tobacco use (54.69%), ensure food hygiene (84.38%). Patients with intermediate or higher education had good or very good knowledge higher than patients with high school education level 6.0 times (OR= 6.0, $p < 0.001$, CI: 2.3-10, 4). Patients who are civil servants have good or very good knowledge higher than the group of patients who are workers, farmers, and pensioners 2.083 times (OR=2.083, $p < 0.001$; CI: 1.05-4.46). Patients living in the urban had 3.73 times better knowledge than patients in rural areas (OR=3.73; $p < 0.001$; CI: 1.74-6.67). **Conclusion:** The general knowledge of patients about the recurrence prevention of gastrointestinal bleeding was quite good. However, there was still a certain percentage of patients who did not have the correct knowledge. It is necessary to have health education programs for patients to improve their knowledge of recurrence prevention of hemorrhage peptic ulcers.

Keywords: Knowledge, gastrointestinal bleeding/hemorrhage, peptic ulcer, recurrence prevention.

1. INTRODUCTION

Gastrointestinal bleeding due to peptic ulcer is the leading cause, accounting for 40-45% of all types of upper gastrointestinal bleeding. Although there are many effective treatment drugs, gastrointestinal bleeding from peptic ulcers is still one of the most

common complications with a mortality rate of about 3 -10% [1], [2]. In the UK, statistics showed that the incidence of gastrointestinal bleeding ranges from 50/100,000 to 190/100,000 population per year and 30-35% of which was due to peptic ulcer [3], [4]. In Vietnam, gastrointestinal

Cor. author: Pham Thi Thu Huong
Address: Phenikaa University
Email: huong.phamthithu@phenikaa-uni.edu.vn

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bleeding due to peptic ulcer accounts for 45% to 56.9% [5], [6].

A peptic ulcer is an acute and recurrent inflammatory disease with many complications, in which gastrointestinal bleeding is the most common and dangerous [6], [7]. In the US, the rate of recurrence of peptic ulcer disease 2 years after treatment was 3.0%, but it will increase to 83.9% with high-risk patients such as using alcohol, stimulants, etc., and NSAIDs [8]. In Korea, the rate of peptic ulcer recurrence, in general, was 36.4% and 43.8% in the group not treated completely with HP [7]. In Vietnam, the recurrence rate of peptic ulcer disease in the first 2 years was relatively high, accounting for over 50% of cases. Patients play an important role in preventing recurrence, as well as complications of the peptic ulcer [1], [3]. Among complications, gastrointestinal bleeding due to the peptic ulcer is the most common, accounting for 15% - 16% of gastric ulcer cases, and is also the most dangerous requiring special attention [8].

In Vietnam, there are now studies on the diagnosis and treatment of gastrointestinal bleeding in patients with peptic ulcer disease. However, studies on patients' knowledge related to the prevention of recurrent gastrointestinal bleeding are still lacking. Through health education programs can improve patients' knowledge. It will contribute to limiting the incidence and complications caused by gastrointestinal bleeding. To provide information for the development of intervention programs, we conducted a study with the following objectives: *To describe the knowledge of recurrence prevention and to find the factors affecting the knowledge of recurrence prevention among patients with gastrointestinal bleeding due to peptic ulcer.*

2. RESEARCH METHODS

2.1. Research subjects:

The patient was being treated for gastrointestinal bleeding due to peptic ulcer disease at 354 Military Hospital during the study period. The patient consented to participate in the study. The patient can communicate, read and write well in Vietnamese. The study was conducted from March 2021 to November 2021.

2.2. Methods:

Cross-sectional descriptive design was used in this study

According to the formula to estimate a proportion of the population:

$$n = Z_{(1-\alpha/2)}^2 \frac{p(1-p)}{\Delta^2}$$

Inside:

n: is the study sample size.

p = 46.57% according to Hoang Thi Le et.al. (2019) [9].

α : is the type I error, estimated in the study = 0.05 with 95% confidence. Then the confidence coefficient $Z(1- \alpha/2) = 1.96$.

Δ : is the desired precision between the sample and the population. Estimated $\Delta = 0.09$.

Accordingly, the minimum sample size of the study was 118 patients. A convenient sampling method was used to select the participants. At the end of the study, we collected 128 patients who met the inclusion and exclusion criteria.

2.3. Research instrument

The questionnaire was built based on the "Guidelines for preventing recurrence of peptic ulcer" of the Ministry of Health in 2014 and the questionnaire of Nguyen Thi

Huyen Trang in 2017 [9]. The questionnaire was divided into 5 parts:

- Part 1: General information about research subjects: Includes 9 items (name, age, gender, education level, occupation, place of residence, duration of peptic ulcer disease, number of recurrences of the disease - gastrointestinal bleeding). This information helps to classify the subjects by age, gender, and occupation...

- Part 2: General knowledge about peptic ulcer disease. This section includes 7 items related to the causes, symptoms, and complications... of peptic ulcer.

- Part 3: Knowledge of diet to prevent disease recurrence. This section includes 12 items related to the foods that peptic ulcer patients should or should not use; The actions that the subjects should and should not do when eating and the precautions when preparing food.

- Part 4: Knowledge of lifestyle to prevent disease recurrence. This section contains 8 items related to lifestyle to prevent the recurrence of peptic ulcer disease.

- Part 5: Knowledge of drug use to prevent disease recurrence. This section has 7 items related to the things that patients with peptic ulcers need to pay attention to when using the drugs.

The validity of the questionnaire was checked by the content validity index (CVI). The questionnaire was sent to 05 experts for comments. The results of the analysis of the content validity of the questionnaire showed that the CVI score was 0.92.

A pilot was conducted on 30 patients who met the criteria. The data was cleaned and entered into SPSS 22.0 software and Cronbach's alpha coefficient was used to evaluate the reliability of the questionnaire.

The Cronbach's alpha coefficient of the questionnaire was 0.81.

Scoring: the correct answer got 1 point, the incorrect answer or do not know got 0 points. The questionnaire consisted of 34 items about knowledge so the total score was 34 points. According to knowledge classification in the study of Padmavathi GV, Nagaraju B, Shampalatha SP & et al (2013) in Bangalore India, knowledge of peptic ulcer was classified into 4 levels: poor, moderate, good, and very good [10].

+ Poor knowledge: score got less than 40% of the total score (equivalent to correctly answering <13 questions).

+ Moderate knowledge: score got from 40 to 60% of the total score (equivalent to correctly answering 13 - 20 questions).

+ Good knowledge: score got from 61 to 80% of the total score (equivalent to correctly answering 21-26 questions).

+ Very good knowledge: score got from 81 to 100% of the total score (equivalent to correctly answering 27 - 34 questions).

2.3. Data collection: Data were collected through direct interviews with the subjects according to the questionnaire about general information and questions about knowledge related to the disease, diet, lifestyle, and drug use to prevent a recurrence.

2.4. Data analysis: Data were analyzed using SPSS 22.0 software for descriptive statistics. Analyze the influence between individual factors, and knowledge through calculation with OR and CI 95%.

2.5. Ethical considerations

Data were collected after approving the ethics committee with No. 347/GCN-HDDD February 26, 2021, of Nam Dinh University of Nursing.

3 . RESULT

3.1. Knowledge of recurrence prevention of peptic ulcer patients

Table 1. General knowledge of peptic ulcer ulcers disease (n = 128)

Contents	Correct answer		Incorrect answer	
	Frequency	%	Frequency	%
The cause of the peptic ulcer disease	34	26.56	94	73.44
Risk factor	26	20.31	102	79.69
Symptoms of peptic ulcer disease	89	69.53	39	30.47
Complications of peptic ulcer disease	72	56.25	56	43.75
Factors that cause ulcers	19	14.84	109	85.16
The role of prevention of gastrointestinal bleeding complications	112	87.50	16	12.50
Signs of gastrointestinal bleeding	90	70.31	38	29.69

Almost all of the subjects had correct knowledge of The role of prevention of gastrointestinal bleeding complications (87.50%). Patients with correct knowledge of ulcer - causing factors accounted for the lowest percentage (14.84%).

Table 2. Knowledge of diet to prevent disease recurrence (n = 128)

Contents	Correct answer		Incorrect answer	
	Frequency	%	Frequency	%
Diet	110	85.94	18	14.06
Vegetables should eat	64	50.00	64	50.00
The way to eat fruit	90	70.31	38	29.69
The way to use protein-rich foods	88	68.75	40	31.25
What kind of meat should eat	76	59.38	52	40.62
The way to use milk	96	75.00	32	25.00
Use sticky rice	94	73.44	34	26.56
The way to use spices	114	89.06	14	10.94
The way to drink water	120	93.75	8	6.26
The suitable temperature of food	68	53.13	60	46.87
Effect of food concentration	92	71.87	36	28.13
The way to eat	118	92.19	10	7.81

Most of the patients correctly answered questions about knowledge related to diet. The lowest correct answer rate was 50% (vegetables should eat) and the highest was 92.19% (the way to eat).

Table 3. Knowledge of lifestyle affecting the disease (n = 128)

Contents	Correct answer		Incorrect answer	
	Frequency	%	Frequency	%
Coffee does not harm the stomach	52	40.63	76	59.37
Can smoke	58	45.31	70	54.69
Mental activity is possible for a period of 30 minutes after a meal	78	60.94	50	39.06
It is recommended to do vigorous physical activity for a period of 30 minutes after a meal to digest food	74	57.81	54	42.19
Stress increases the production of stomach acid, causing peptic ulcers to recur	66	51.56	62	48.44
Eat a light meal before going to bed so that your stomach is not empty	46	35.94	82	64.06
Keep the abdomen warm	78	60.94	50	39.06
Ensuring a hygienic diet helps prevent the recurrence of ulcers	108	84.38	20	15.62

The knowledge with a high percentage of subjects answering correctly was Ensuring hygienic eating to prevent the recurrence of ulcers (84.38%).

Table 4. Knowledge of drugs use (n = 128)

Contents	Correct answer		Incorrect answer	
	Frequency	%	Frequency	%
The use of drugs when the symptoms are gone	84	65.62	44	34.38
The use of drugs when stomach pain returns	98	76.56	30	23.44
The role of informing healthcare workers about their symptoms	108	84.37	20	15.63
Frequency of use of NSAIDs	50	39.06	78	60.94
The way to take NSAID tablets	44	34.38	84	65.62
The way to take NSAID capsules	42	32.80	86	67.20
Amount of water used when taking NSAIDs	52	40.63	76	59.37

Most of the patients correctly answered the questions about how to take the medicine when the symptoms were gone (65.62%), or when the symptoms of abdominal pain recur (76.56%). Less than half of patients correctly answered questions related to NSAID use.

Table 5. Mean score of knowledge (n = 128)

Knowledge about disease	Min	Max	Mean \pm SD
General knowledge of disease	3	7	5.58 \pm 2.01
Knowledge about diet	2	10	8.06 \pm 2.27
Knowledge of lifestyle/habits	0	8	5.38 \pm 2.11
Knowledge of drugs use	0	6	4.55 \pm 1.53
Total score	8	31	23.56 \pm 6.40

The mean score of the patient's knowledge of recurrence prevention was good (23.56 points). Which, the mean score of knowledge of diet was the highest (8.06 \pm 2.27), followed by the knowledge of drug use (4.55 \pm 1.53).

3.2. Effect of general information on knowledge of recurrence prevention gastrointestinal bleeding in patients with peptic ulcer

Table 6. Effect of general information on knowledge of recurrence prevention gastrointestinal bleeding in patients with peptic ulcer (n = 128)

Characteristic	Good and very good knowledge		Poor and moderate knowledge		p . value	OR (CI 95%)	
	Frequency	%	Frequency	%			
Education level	Above high school (Intermediate/ Diploma/ Bachelor)	48	77.42	14	22.58	<0.001	6.0 (2,3-10.4)
	High school and below	24	36.36	42	63.67		
Occupation	Civil servants	38	73.08	14	26.92	< 0.01	2.08 (1.05-4.46)
	Workers, farmers, pensioners, housewives	43	56.58	33	43.42		
Gender	Male	49	58.33	35	41.67	0.64	0.86 (0.32-2.01)
	Female	24	54.55	20	45.45		

Characteristic	Good and very good knowledge		Poor and moderate knowledge		p . value	OR (CI 95%)	
	Frequency	%	Frequency	%			
Age	< 60 years old	34	53.12	30	46.88	0.04	1.81 (0.95-3.25)
	60 years old	43	67.19	21	32.81		
Accommodation	Urban	49	58.33	35	41.67	<0.001	3.73 (1.74-6.67)
	Rural	12	27.27	32	72.73		
Number of times gastrointestinal bleeding	Twice	37	56.06	29	43.94	< 0.01	2.32 (1.29-4.53)
	Once	22	35.48	40	64.52		

Some demographic characteristics of the subjects that affect the perception of recurrence prevention are as follows: Patients with intermediate or higher education had good or very good knowledge higher than patients with high school education level 6.0 times (OR = 6.0, $p < 0.001$, CI: 2.3 - 10, 4). Patients who are civil servants have good or very good knowledge higher than the group of patients who are workers, farmers, and pensioners 2.083 times (OR = 2.083, $p < 0.001$; CI: 1.05 - 4.46). Patients living in the urban had 3.73 times better knowledge than patients in rural areas (OR = 3.73; $p < 0.001$; CI: 1.74 - 6.67).

4. DISCUSSION

4.1. Knowledge of recurrence prevention of peptic ulcer patients

The general knowledge of patients about recurrence prevention was quite good (23.56 ± 6.40 points). The proportion of patients with correct knowledge of the disease was relatively high, such as symptoms of peptic ulcer disease (69.53%), signs of gastrointestinal bleeding (70.31%), and the role of preventing complications of gastrointestinal bleeding (87.50%). In addition, the proportion of patients with incorrect knowledge was also relatively high such as causes of peptic ulcers (73.44%), risk factors (79.69%), and factors that cause ulcers (85.16%). Therefore, it is necessary to have detailed plans to guide and provide more knowledge to patients about those contents.

Diet for stomach disease patients is very important. Some foods will increase stomach acid secretion, which will cause serious damage. However, some foods can reduce acid secretion, so that the stomach is not damaged. The results of our study showed that the majority of patients had good knowledge about diet (85.94%). This result was similar to the study of Le Minh Hong and lower to the result of Nguyen Thi Huyen Trang [11]. However, none of the subjects got the maximum score, so it is necessary to have detailed instructions for the patient about the diet and how to use foods that are good for the stomach.

The results of the study on the knowledge of using drugs to prevent relapse were not high (4.55 ± 1.53). This result was similar to the results of Nguyen Thi Huyen Trang [11], the frequency of using NSAIDs was correctly reached at 39.06%, and the correct

way of taking NSAID tablets and capsules was: 34.38% and 32.80%, respectively. When the disease recurs, many patients tend to be afraid to go to the hospital, so they bought medicine to take at home, and only go to the hospital when they had dangerous symptoms such as vomiting blood, passing black stools, or being very tired. In Le Chuan's study, the percentage of people who bought drugs on their own was high (59.09%), the number of people who used prescription drugs accounted for a low rate (40.9%), the proportion of people who used modern medicines dominated (76, 51%), duration of drug use in 1-2 weeks (58.32%) and > 3 weeks (12.87%) with ($p < 0.01$) [12]. This shows that the patient did not comply with the drug regimen. This is the cause leading to gastrointestinal bleeding complications in patients with peptic ulcers.

4.2. Effect of general information on knowledge of recurrence prevention gastrointestinal bleeding in patients with peptic ulcer

Research results have shown that patients with intermediate or higher education had better knowledge than patients graduating from high school with OR = 6.0 (CI 95%: 2.3 - 10.4). Differences in knowledge also occurred between different occupational groups. Civil servants had better knowledge than workers, farmers, and pensioners with OR = 2.083 (CI95%:1.05 - 4.46). In our study, gender did not affect knowledge (OR = 0.86, (CI 95%: 0.32 - 2.01)). Regarding age, we divided into 2 age groups above and below 60 years old and recorded that age affects the knowledge of patients (OR = 1.81, CI 95%: 0.95 - 3.25). Some studies have shown that the older the patient, the higher the recurrence rate [1], [13]. Due to aging, the ability of the elderly to absorb knowledge is also lower than that of young people, which is also an issue that needs

attention when Vietnam is also facing an aging trend. This was consistent with our study results that the elderly over 60 years of age have poorer knowledge than the age group under 60. Moreover, the elderly often suffer from chronic diseases such as diabetes, hypertension, and heart disease. This is also considered to be a factor that increases the risk of recurrence and bleeding serious complications if the peptic ulcer is present. Our study did not explore the patients' chronic co-morbidities, which is also considered a limitation of this study. Patients living in the urban had better knowledge than patients living in rural areas OR = 3.73 (CI95%:1.74 - 6.67). Many studies also showed that the level of education as well as the access to information and health of urban people was better than people living in rural areas [2]. Patients with recurrent disease many times have a better understanding and knowledge than those with the first time (OR = 2.32). When the disease recurs many times, the patients had experienced and understood their disease, so their knowledge was also higher than that of new patients.

5. CONCLUSION

Patients with gastrointestinal bleeding due to peptic ulcer had some knowledge about the prevention of gastrointestinal bleeding recurrence. Some knowledge about the disease was limited, knowledge about the diet was not correct, and some habits/lifestyles were not properly understood by the patient. In particular, the maintenance of drug use to prevent relapse has not been fully adhered to. People with low levels of education, pensioners, and people living in rural areas were the groups with poor knowledge. Therefore, when providing health education counseling and guidance, it is necessary to pay more attention to these groups of people and provide knowledge

appropriate to the characteristics of each target group.

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