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Education and health behavior of patients with gastric ulcer

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SUMMARY

Ulcer disease is one of the most common gastrointestinal condition. The aim of the work is to prove the need for education concerning this disease and to present the lifestyle and health behavior of a person suffering from this condition. The method of case study was used in this study. The author used a questionnaire survey and interview technique, observation and analysis of patient documentation. The results of our research were compared with those of other Polish authors dealing with the topic. The results outline the patient's knowledge of general illness and proper diet; as well as engaging unhealthy behaviors, despite having sufficient knowledge concerning healthy lifestyle.

KEYWORDS: Ulcer disease, gastrointestinal disease, *Helicobacter pylori*, education, health behavior.

Introduction

Peptic ulcer disease is not only a problem of our time. The symptoms of that condition were described for the first time by Hippocrates born in the 5th century BC [7]. Although this condition has been present for centuries, the lack of elementary knowledge about prophylaxis and the disease itself concerning about 10% of the adult population is alarming [1,2,8]. In Poland, the diseases of the digestive tract affect 555 per 10,000 people. Most people are between 55 and 64 years old [5]. In 2015 this number increased by nearly 2,500. [4]. In the United States, peptic ulcer develops in approximately 500,000 people yearly [10]. Although it is one of the most socially recognized diseases, there is still a deficit of knowledge in this area. Most of the factors that cause or exacerbate the disease lie within the scope of the patient's influence. Inadequate health behaviours resulting from lack of knowledge take away the chances of a healthy life. Knowledge of the underlying symptoms of the illness, such as postpartum epigastric pain, nausea, feeling of early satiety, intolerance to fatty foods or bloating, increases the chance of a quicker visit to a doctor, avoiding life-threatening complications. Inadequate diet and stressful situations reduce the prevalence of early onset symptoms [2,3,8,13,16]. Good dietary habits, increased fibre intake as well as zinc and vitamin C supplementation may significantly improve the quality of life in patients by reducing the symptoms and preventing recurrence [11]. Although the detrimental effects of non-steroidal anti-inflammatory drugs NSAIDs are publicized, their abuse as one of the reasons for the development of peptic ulcers continues to be recorded in large numbers [9].

This is related to the intrusive advertising of these products, where they are presented only in superlatives, and the long-term consequences of their application are ignored. In the age of the Internet and almost unlimited access to information the low level of public awareness regarding healthy living raises concerns. In society, peptic ulcer began to be considered normal and often inevitable, in result it ceased to raise any concerns. It may seem that by the fact that it is a disease so popular and well known to everyone, there is no need to invest in social campaigns informing about the threat. Unfortunately, too few people know that complications can be dangerous. The most common complications include bleeding - 25% of patients, perforation - up to 7%, pyloric stenosis - up to 4% [1,2]. In addition, a study by Japanese physicians in a group of 1200 patients showed that gastric cancer develops in 8 out of 944 patients cured of *Helicobacter pylori*, which accounts for 0.85% of cases, and in 4 out of 176 people with chronic infection - 2,3. % [14]. Early eradication of bacteria reduces the risk of carcinogenesis [15]. By analysing the results of studies on public knowledge of gastric ulcer, one can find that even basic information concerning the disease, or its definition, is unknown. The vast majority of people who imagine an ulcer as a convex variation, what significantly differ from the actual image; as it is a defect in the mucous membrane.

Objectives

The aim of the study was to present the health behaviours of patients with gastric ulcer and to determine the need for education in this area. The results were compared with the results of other Polish research on the topic of peptic ulcer.

The case description

Patient, 75 years old, was admitted to the Gastroenterology Clinic of the Independent Public Clinical Hospital No 4 in Lublin, as an emergency. The reason for hospitalization was bleeding from the upper gastrointestinal tract manifested by vomiting blood and tar stools caused by stomach ulcers. An episode of gastric ulcer was reported in 2012 and the patient suffered from hypertension. He also reported smoking approximately 30 cigarettes a day for 60 years. Due to unfavourable results (Haemoglobin 8.4 g / dl, erythrocytes 2,64M / μ , haematocrit 23.6%), transfusion of two Red Blood Concentrate Units in three successive days was undertaken. The drug therapy also included Nexium, Cyclonamine i Nitredypine.

Materials and methods

The casuistic method was used in the study to enable holistic overview of the patient and determination concerning the degree of knowledge about gastric ulcer and principles of the healthy lifestyle. Interviews with the patient, observation, and patient documentation were used to answer the questions discussed in this paper, as well as a questionnaire consisting of two parts. The first part contained questions concerning the lifestyle, the number and type of meals eaten, the use of stimulants, physical activity, exposure to stress and how to deal with them. The second part tested the knowledge from 3 groups: general knowledge about gastric ulcer, dietary habits and healthy lifestyle. In addition, questionnaires were used to evaluate: nutritional status of MNA, periodic dietary habits according to Starzyńska, degree of nicotine addiction according to Fagerstrom and motivation to stop smoking according to Schneider.

Results and their analyses

An analysis of the lifestyle questionnaire shows 4 aspects where the patient makes mistakes in health behaviour.

The first group includes smoking. The patient has been smoking approximately 30 cigarettes a day for 60 years. He exhibited knowledge concerning the malignance of addiction, however, it did not affect the patient's life. Nicotine addiction questionnaire by Fagerstrom indicated strong dependence. Consequently, Schneider's questionnaire was also used. The results of the survey showed a strong motivation to break the habit, nonetheless he could not cope with that problem and needed help. In the knowledge test, the patient responded positively to questions regarding the effect of smoking on the healing of ulcers and the general effect of nicotine on the body. He could not estimate how many carcinogens were in a cigarette and was not aware of the recommendations concerning vitamin C supplementation by smokers.

Moreover, behaviours not facilitating healthiness include lack of physical activity and inability to cope with stressful situations. Despite the lack of their implementation, patients' knowledge about these issues was abundant. Correct answers in this area accounted for 62.5%. The patient demonstrated knowledge of the recommended physical activity, he knew

the effects of chronic stress, and how to combat it. Unfortunately, the knowledge was not used by the patient in practice.

The greatest deficit is visible in the knowledge concerning proper nutrition, which negatively affected patient's habits. According to the questionnaire, the periodical diet score according to Starzyńska, patient's diet was assessed as bad and improper. The sum of the nutrition score questionnaire MNA indicated malnutrition, even though his BMI was within the lower end of the normal category.

The conclusions drawn from the analysis of both tests demonstrated that the patient did not possess the knowledge regarding proper nutrition. This was reflected in the results concerning the test of knowledge showing, among others, deficits in knowledge concerning the healthy eating pyramid; high fibre diets - despite the awareness of reducing the recurrence of the disease using high fibre diets, types of fatty acids and their sources, the role of zinc and vitamin C in peptic ulcer and the products in which they could be found. The results of the test investigating the knowledge on the issues amounted to merely 38.8% of correct answers. Correct answers in the test examining general knowledge on the gastric ulcer should come to 50%. The patient knew the definition of ulcer, the diagnosis allowing to identify the disease and the blood type increasing the risk of the disease. He also characterized the accompanying pain and he indicated the most common complication. Though, the patient did not have any knowledge concerning the bacterium causing disease, and the causes of the disease. Questions regarding the use of NSAIDs and medications to help alleviate pain were also problematic.

In summary, the greatest knowledge deficits patient manifested in the field of proper nutrition in case of gastric ulcers. Although, he possessed knowledge concerning the recommended physical activity or quitting smoking, the patient lacked the perseverance to incorporate that knowledge into practice. The results showed not only the lack of education in the patient, but also the lack of proper attention to whether the patient understood the problems of his illness and whether he was able to cope with the difficulties encountered.

Discussion

The results of our scrutiny were compared with the results of studies published in 2005, 2007 and 2013. In all studies, respondents pointed to stress as the most common cause of peptic ulcers.

Subsequent cause of the disease related to improper dietary habits. Similar opinion was expressed by the described patient. These results are in opposition to the literature on the subject, as textbooks report that *Helicobacter pylori* infection is mostly responsible for ulcers. However, it is important to consider whether the lifestyle of most people does not contribute to an increase in susceptibility of infection with this bacterium. Continuous haste, stress and fatigue weakens the immune system, which becomes more susceptible to infections and illnesses, so the respondents' answers should not be considered incorrect.

Study conducted in 2005 by Kogut and Siwek evaluated patients' knowledge of the risk factors for gastric and duodenal ulcers. 78% of respondents stated that they were often exposed to stress and conflict, and 90% of all respondents indicated that diet played a major role in treating peptic ulcer. However, only 10% of them knew what its significance was. The analysis of the responses given by the patient is consistent with the results of the above study. On the other hand, in 84% of the respondents the most common symptom of the disease was pain in the upper abdomen, whereas in our case study the patient did not exhibit such symptoms.

Furthermore, the research by Rybowksa and Bardoszevska (2007) examined the nutritional status of people with various diseases of the digestive system. In the study, 43% of the respondents consumed three meals a day, 24% four meals a day, 19% five meals a day. The described patient was eating 3 meals a day, although only the dinner was consumed in full. 88% of respondents admitted snacking between meals. However, this behaviour did not occur in the exemplary patient. The dietary habits of the respondents largely coincided with the diet of the patient. Frequently consumed foods included poultry, white bread, cooked food-stewed in case of our patient, dairy and tea. In both cases alcohol was avoided.

Research by Jaźwiec et al. (2013) investigated the level of knowledge of Upper Silesia region residents on ulcer disease. When asked about the definition of ulcer, only 7.9% of respondents provided the correct answers. In this case, the examined patient represented the minority, as he knew the answer to that question. In the question of *Helicobacter pylori* and

its effect on peptic ulcer formation, the younger people responded more frequently correctly. The patient like commencing his education before the impact of *Helicobacter pylori* on the development of peptic ulcer occurred in the 1980s. The most frequently reported complication was haemorrhage, enumerated by 90.6% of respondents. Similar response was provided by the described patient.

On the other hand, the knowledge concerning the pharmacological treatment was insufficient in both, the respondents and the patient from our case study.

Analysis of the research studies compared with the patient's responses indicated that in most questions the patient possessed the same knowledge deficits as the respondents.

Conclusions

Based on the study, the following conclusions have been formulated:

1. The patient is characterized by the deficits in knowledge concerning healthy eating pyramid, products rich in fibre, the process of supplementation with zinc and vitamin C.
2. The respondent has no knowledge concerning the detrimental effect of NSAIDs, as well as pharmacotherapy implemented to alleviate the outcomes of the disease
3. The patient does not exhibit the ability of dealing with stressful situation, even though he possesses the knowledge on the matter.
4. The patient is knowledgeable regarding the harmfulness of smoking and he exhibits the motivation to break up with the addiction, nonetheless he has no ability to quit smoking.
5. The patient knows the definition of the ulcer and he enumerates tests assisting at diagnosis of the disease and the complications of the ulcer.

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