

Assessment of quality of life of patients after resection of gallbladder with laparoscopic and traditional method

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Admission

Cholelithiasis is one of the most common conditions in the abdominal cavity. The highest incidence is observed in highly developed or developing countries. Bile duct diseases often require surgical treatment, which is a great physical and mental burden for the patient. The perspective of the surgical procedure and the accompanying circumstances is a sense of insecurity and fear for the patient and his family. The fact of the prevalence of cholelithiasis and the effects of the disease may have an impact on the quality of life of people after gallbladder surgery.

Objective of the work

The aim of the study was to assess the quality of life of patients after resection of the gall bladder using laparoscopy and traditional methods.

Research methods

As a research method, the diagnostic survey method was used, a standardized WHOQOL-BREF questionnaire was used, in which the analysis of the collected material referred to the somatic, psychological, social and environmental sphere.

Results

The obtained research results allowed to state that socio-demographic variables differentiated the patients' opinions on the subjective assessment of the quality of life and health. The place of residence does not have a significant impact on the quality of life.

Key words: quality of life, gall bladder resection

Introduction

The gall bladder is a pear-shaped tank with a physiological capacity of 30-50 ml. [1] The emptying of the gallbladder is controlled by two mechanisms resulting from the action of nerve endings and secreted hormones. A hormone such as cholecystokinin shrinks the gall bladder. In contrast, parasympathetic nerve branches that run from the vagus nerve and sympathetic from the celiac plexus control the follicle function. There are two functional phases of the gallbladder. The phase between the auxiliary: which is divided into the phase: cerebral, gastric, ulcer, caecal - transverse. Phase after exercise. In the phase between the auxiliary, otherwise known as resting phase, the bile of the gallbladder with the hepatobiliary bile is simultaneously filled and mixed. In the resting phase, the influence of the vagus nerve and intestinal peptides, which cause the gall bladder wall to relax, is noticeable. In the cerebral ascending phase, the vagus nerve plays a crucial role by contracting the gall bladder. In the next gastric phase, gastrin having decongesting properties plays an important role. In the intestinal phase, cholecystokinin is released. In addition to the contraction action shown by the vagus nerve and cholecystokinin, they also affect the sphincter Oddi. The gall bladder causes a 2 - 10 fold thickening of bile by absorbing water and compounds contained in it. This is a physiological process, however, if some abnormalities coexist, the compaction contributes to the precipitation of the stone components from the solution. The follicle also has secretory functions, primarily mucus and electrolytes. The task of the bile ducts is to discharge the bile from the liver cell to the duodenum. After connecting the inflow of bile from both liver lobes, the hepatic ducts form the common bile duct. In its upper part, the alveolar line with the gallbladder leaves. The bile is

stored in this vesicle. The common bile duct protrudes along with the main pancreatic duct to the descending part of the duodenum. [2]

Cholelithiasis is a disease consisting of the formation and accumulation of gallstones in the gall bladder. It is one of the most common diseases in the abdominal cavity. Stones can form in the gallbladder itself or in the bile ducts. Cholelithiasis is manifested by a biliary colic, i.e. acute abdominal pain developing as a result of an increase in pressure in the gall bladder. In addition, there are nausea, vomiting, abdominal distension, heartburn and soreness of the right-sided finial region. Sometimes the enlarged bubble can be felt through the skin. Cholelithiasis leads to inflammation, cholelithiasis to partial or complete obstruction resulting in mechanical jaundice and pancreatitis due to obstruction of the pancreatic ducts. [3]

We divide gallstones by: numbers (single, group); number of ingredients (single component, multi-ingredient), and by ingredients (cholesterol, dye, cholesterol-calcium, cholesterol-calcium-dye). Gallstones are formed as a result of the precipitation of insoluble components contained in the bile. These include, above all, cholesterol, proteins and bile salts. The tendency to form gallstones may be due to several reasons, such as increased biliary cholesterol, reduced bile acids or bile outflow. Factors conducive to the occurrence of cholelithiasis are often genetic factors such as: female sex, old age, estrogen intake, obesity, co-morbid diabetes, cystic fibrosis. [4]

The most characteristic symptom of cholelithiasis is paroxysmal acute abdominal pain (bile colic) located in the subcutaneous well, or in the right suborbital, radiating to the shoulder, shoulder and spine. He is accompanied by nausea and vomiting. Gallbladder attacks occur most often after a diet error or strong emotions. Pain can persist for several hours, then gradually disappear. Uncharacteristic symptoms of biliary colic include heartburn, epigastric discomfort, abdominal distension. Pain persisting over six hours, and the fever that accompanied him, shivering, indicate complications of cholelithiasis. Another symptom is the palpation soreness of the right scapular area, and the positive Chełmoński symptom. [5]

The scale of symptoms occurring in cholelithiasis is quite large and in the majority of patients the symptoms may be small or not present at all. Among the attacks of the hepatic colic there may also be complaints such as indigestion, intolerance of fatty foods, flatulence, belching, heartburn, constipation, discomfort in the area of the abdomen. These symptoms, known as dyspeptic, are often non-specific for cholelithiasis and always require careful diagnosis. Attaching fever, mechanical jaundice, diarrhea already indicate some complications. Revealing them is an indication for surgical treatment [6,7].

There are two methods of treatment of cholelithiasis: surgical and non-surgical. The best way to treat the known cholelithiasis is by surgery. The surgical method consists in opening the abdominal cavity by incising the skin layers over a length of about 10 cm and thus removing it. The laparoscopic method of removing the gall bladder consists in making three incisions of skin layers of about 1 cm in length each and insertion of a camera and surgical instruments. [8,9] Due to the fact that about 80% of cases of cholelithiasis progresses without typical symptoms, the number of complications of the disease increases. [10]

Purpose of research

The aim of the presented study is to assess the quality of life of patients after resection of the gallbladder using the laparoscopic and traditional methods.

Material and methods

The method of the diagnostic survey and the technique of the survey were used in the work. The research material was collected using a standardized research tool, i.e. the WHOQOL-Bref scale. The questionnaire WHOQOL - BREF is a standardized research tool used to assess the "quality of life" of healthy and sick people. It consists of ready-made questions about the four basic spheres of life, i.e. the somatic, psychological, social and environmental spheres. The somatic sphere includes questions 3, 4, 10, 15, 16, 17, 18. The psychological sphere is assigned to questions 5, 6, 7, 11, 19, 26. The social sphere contains three questions (questions 20, 21, 22) . To the last sphere, which is the environmental sphere, are questions 8, 9, 12, 13, 14, 23, 24, 25. The following elements are comprised in particular areas of life: somatic sphere, psychological sphere, social sphere, environmental sphere. The scale of points ranged from 1 to 5, has a positive direction - the higher the number of points, the higher the quality of life.

The research group consisted of 100 people. Respondents are mainly patients of the Poviast Hospital in Łęczna. The research was carried out from 14/06/2017 to 31/11/17 at the surgery ward. The necessary consents of the Hospital Director as well as the patients themselves were obtained. Participants' participation was voluntary, respondents were informed about the anonymity of the research, and the results will be used only for scientific purposes.

The obtained results are given by statistical analysis. The values of the analyzed parameters are presented using the mean, median, minimum and maximum values. The Mann-Whitney U test was used to compare independent groups. For more than two groups, the Kruskal-Wallis test was used. The formula for the correlation of R. Spearman was used to examine the relationships between the variables. The $p < 0.05$ level was assumed indicating the existence of statistically

significant differences or dependencies. The database and statistical surveys were based on Microsoft Office Excel 2007 computer software and IBM SPSS Statistics 21 research. 100 people were examined, 80% of them (n = 80) were women, 20% were men (n = 20).

The smallest group were people aged 20-29, 4% (n = 4), and seniors aged 70 and more 6% (n = 6). The most numerous group were people aged 60-69 - 37% (n = 37), and 50-59 years old 22% (n = 22). Patients aged 40-49 accounted for 15% (n = 15) of the subjects, and 16% were people aged 30-39.

As a result of the conducted research, it can be stated that the respondents rated their quality of life as good, despite the disease, as 53% (n = 53), 22% (n = 22) gave a very good grade. Another 20% (n = 20), stated that it is neither good nor bad, the remaining 5% (n = 5) issued a bad grade, none of the respondents marked the note - very bad.

In the further part of the research it was shown that more than half of respondents 53% (n = 53) are satisfied with the general state of their health. 29% (n = 29) is neither satisfied nor satisfied. 9% (n = 9) of respondents are very satisfied and 9% (n = 9) dissatisfied.

Statistically, the assessment of the quality of life in the group of patients after resection of the gall bladder was analyzed. The results obtained indicate a low level of overall health quality. The overall assessment of the "quality of life" in the sphere of social relations is slightly higher. General quality of life and health notes, including the sex of the respondents. The data show that women rated quality of life and health slightly higher than men i.e.: x = 3.7, and men x = 3.40. The analysis of age dependence and their quality of life did not show statistically significant correlations between these variables.

The largest x-values are found in the youngest groups of respondents, namely: 20-29-years-old and 30-39 year-olds. Between the ages of 20-29, patients received the highest score of the overall assessment of quality of life x = 4.25, and in the range of 30-39 years old in the social sphere x = 4.44. The lowest values were recorded: for the overall quality of life in the 40-49 age range (where x = 3.33), for the overall quality of health in the range of 70 and more years (where x = 3.17). In the somatic sphere in the range of 70 and more years (where x = 3), in the psychological sphere in the range of 40-49 (where = 3.13), in the environmental sphere in the range of 20 - 29 years (where x = 3.5)

Taking into account the above results, it can be concluded that the quality of life was at the lowest level in the group of 40-49 - years old and in the oldest respondents, i.e. in 70 - years - old and more. The highest score was recorded in the group of respondents aged 20-29 x = 3.75, and in the range 50-59 years x = 3.73. The lowest value was recorded among 40-49 years old x = 3.20. After a thorough analysis of the dependence of education and quality of life, a

statistically significant result was recorded in the psychological sphere ($p = 0.025$), correlation at the level of 0.05.

After analyzing the relationship between the quality of life and health perception and the level of education of respondents, it was found that people with basic education obtained the lowest result in the somatic sphere, i.e. $x = 3.13$ with $Me = 3$, the highest in the social sphere, i.e. $x = 3.87$. Persons declaring vocational education - the lowest scores were obtained in the psychological sphere, i.e. $x = 3$ with $Me = 3$, the highest in the overall assessment of quality of life, i.e.: $x = 3.91$. In people with secondary education, the lowest values were recorded in the psychological sphere, $x = 11$ with $Me = 3$, and the highest in the overall assessment of quality of life $x = 4$ with $Me = 4$, and in the social sphere $x = 4.08$. In people with higher education, the lowest values were obtained in the somatic sphere, i.e. $x = 3.18$ and the highest value was obtained in the general assessment of health quality $x = 3.93$.

Statistical analysis also included correlation of patients' marital status and quality of life and satisfaction with life. In this area, a statistically significant result was also recorded in the general quality of life $p = 0.016$, correlation at the level of 0.05. In the group of free subjects the highest score was obtained in the assessment of the quality of life $x = 4$, and the lowest in the psychological sphere $x = 2.86$. Among the unmarried people - after divorce, the highest value in the social sphere was recorded $x = 3, 55$, and the lowest in the somatic sphere $x = 2.82$. Among the widowed people, the highest score is in the social sphere, where $x = 4, 07$, and the lowest in somatic $x = 3.14$. The married people rated the highest in the quality of life and the social sphere, where $x = 4, 04$ and 4.01 .

When assessing individual domains in relation to place of residence, a statistically significant result was recorded in the overall perception of health. In the urban population group the highest scores in the assessment of the quality of life $x = 3.98$, and in the social sphere $x = 3.97$, while the lowest in the psychological sphere $x = 3.25$. In the rural population group, the highest scores were obtained in the assessment of the quality of life and the social sphere $x = 3.83$, and the lowest in the somatic sphere $x = 3.13$.

Statistical analysis also showed a correlation of the general quality of life and housing alone, or with the family $p = 0, 012$, correlation at the level of 0.05, as well as in the somatic sphere and living alone, or with the family $p = 0.004$, correlation at 0.01 . This is presented in detail in the table below.

In the group of people living alone, the highest value in the social sphere can be noted $x = 3, 94$, and the lowest in somatic $x = 2.89$, the highest in the sphere of quality of life $x = 4.01$ and the lowest in the psychological sphere $x = 3.28$.

In the context of the general quality of life and health, the respondents rated 66% in good, followed by a group of respondents with a satisfactory grade of 29%, only one person indicated a very good note, 1%, the remaining 4% were the lowest or inadequate . As a result of the correlation analysis, a significant relationship was found between the assessment of the quality of life and health, and the quality of life in the somatic, psychological, social and environmental spheres. In all spheres, the correlation was statistically significant at 0.01.

The results obtained above were subjected to statistical analysis using: U Mann-Whitney test and Kruskal-Wallis test. For this analysis a zero hypothesis was adopted and the distribution of results in individual spheres of life and health is the same for each variable.

Conclusions

By thoroughly analyzing the statistical material, the research material confirms that the age of the respondents is important in the overall assessment of quality of life and health, where the highest score was obtained in respondents aged 30-39, the lowest was found 40-49 and subjects from the age group 70 and more years. Sex does not affect the assessment of health and life quality.

The education of respondents is very important. In the group of people with secondary education, the highest scores were recorded, while those with secondary education had the highest value of the minimum mark. A significant relationship was found between education and their subjective assessment of the quality of health and life.

The research results indicate that the place of residence has a slight impact on the level of life and health in the sphere of the general assessment of quality of life and health. It should be said that the quality of life is at a similar level in the countryside as in the city. In recent years, the living conditions in the countryside have improved greatly. Single-dwelling people issued lower marks. Respondents living with the family obtained much higher results. Free respondents put the highest scores in the overall assessment of the quality of life, the others highly rated the social sphere.

Discussion

Gallbladder resection, like any surgical procedure, significantly affects each patient's life. The very awareness of the diagnosis made, the need to perform the surgery has a significant impact on the patient's attitude in all spheres of life. Both age, education, marital status, temperament, and temperament affect his attitude to the disease, and the attitude he will take after surgery.

The quality of life of patients after resection of the gallbladder depends primarily on the patient's psychological approach, his attitude to life, temperament and, above all, on the lifestyle he will follow after surgery. A very important issue is first of all diet, before the body gets used to the fact that bile flows straight from the liver to the duodenum. It will probably take several weeks. Most patients after resection of the gall bladder, however, return to the usual diet.

From among scientific reports, the quality of life of patients after surgery also depends on the method of treatment. Statistical studies in Europe and in Poland show that the quality of life of patients after laparoscopic cholecystectomy is higher than after the classic one. [11]

This procedure in Western European countries is a procedure of choice. Dr Jolanta Terlecka and dr Włodzimierz Majewski from the Independent Laboratory of Nursing Surgery at the Pomeranian Medical University in Szczecin carried out such research in 2007. Their research has confirmed that emotional attitude of patients to surgery and disease and vulnerability to stress is very important. [12]

Research in this study also confirms that the mental state and emotional approach to the disease have a very important impact on the course of treatment and the quality of life of patients. The age and education of the respondents and the fact whether they live alone or with their family are also of great importance. Lonely people rated the quality of life, were also pessimistic about their health and overall treatment. These deviations have exhausted the criterion of group non-homogeneity, however, it is difficult to match respondents with equal vulnerability to stress and emotional attitude.

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