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NURSING CARE OF A PATIENT DIAGNOSED WITH CHOLECYSTOLITHIASIS, TREATED BY LAPAROSCOPIC SURGERY

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ABSTRACT

Introduction. Cholecystolithiasis is one of the most common abdominal disorders. Asymptomatic cholecystolithiasis treatment is not undertaken, when clinical symptoms of the disease occur, it is usually treated by laparoscopic or classical cholecystectomy. Currently, a laparoscopic method is recognized as the most beneficial and safest method for removing bile deposits.

Aim. The aim of the study is to show the nursing problems of a patient diagnosed with cholecystolithiasis, treated by laparoscopic surgery.

Methods and materials. The study was based on the individual case study method, using research techniques such as observation, nursing interview, documentation analysis and measurement. The research tools used for the study are the Individual Nursing Care Card, the Visual Analogue Scale - VAS and the Apfel Score to assess the risk of postoperative nausea and vomiting.

Findings and conclusions: During the research process, 7 nursing diagnoses were made regarding health problems of the hospitalization period of a patient diagnosed with cholecystolithiasis, treated by a laparoscopic method. The patient after a surgery involving the removal of the gallbladder suffers from pain caused by tissue disruption, nausea, dizziness and anxiety manifested mainly in the evening, making it difficult for the patient to sleep soundly.

Key words: *nursing care, laparoscopic surgery, cholecystolithiasis*

Introduction

Cholelithiasis is a disease involving the accumulation of deposits in the lumen of the gallbladder or bile ducts, often leading to the occurrence of gall colic of varying severity and frequency, as well as cholecystitis. The presence of deposits (*stones*) in the bile ducts can result in the development of mechanical jaundice and acute pancreatitis. Chronic, untreated cholelithiasis is also the most common cause of gallbladder cancer development. The occurrence of cholelithiasis is found in about 15% of the adult population in Poland. It is asymptomatic urolithiasis that is most often diagnosed [1].

Factors predisposing to the development of cholelithiasis include a female gender, numerous pregnancies, over 40 years of age, obesity, bad high-fat diet and genetic factors [2]. Also, the presence of metabolic diseases such as diabetes or obesity, cystic fibrosis, hypertriglyceridemia, hemolytic anemia, Leśniewski – Crohn disease or cirrhosis are also among the risk factors for this disease. In addition, the use of certain drugs (*estrogens, oral contraceptives, fibrates, ceftriaxone, somatostatin and its analogues*), sudden weight loss after a surgery or as a result of a restrictive diet, low physical activity with a diet high in fat and long – term parenteral nutrition may result in stone formation in the bile ducts [3].

In 80% of cases, cholelithiasis is asymptomatic. In the remaining 20% of cases pain in the form of bile colic occurs, which is the main subjective symptom accompanying cholelithiasis [4, 5].

Gallbladder (*hepatic*) colic is a sudden, severe pain in the abdomen that occurs as a result of increased pressure in the gallbladder by blocking its lumen with current deposits. Pain occurs unexpectedly, very often after a heavy, greasy meal. Pain is localized in the area of the right hypochondrium or in the midepigastrium, sometimes it may radiate to the right scapula. Bile colic usually lasts from 30 minutes to 5 hours [6].

Cholelithiasis may be accompanied by nausea and vomiting, which most often occur along with pain. Uncharacteristic symptoms are heartburn, gastrointestinal disorders after eating fatty food, and flatulence. Pain lasting for over 5 hours, fever and chills may suggest complications after underwent cholelithiasis. Subjective symptoms include a positive Chełmoński's sign (*pain when compressing the right subcostal region*) and / or a positive Murphy's sign (*the patient interrupts a deep breath due to severe pain caused by compression of the gallbladder region*) [7,8].

When diagnosing cholelithiasis, we use medical and nursing interviews, as well as physical, laboratory and imaging tests. The doctor's and nursing interviews are the first, extremely important stage of collecting information about a patient, therefore it should be carried out with accuracy and precision. Nonoperative symptomatic treatment of cholelithiasis consists in administering analgesics and vasodilators [8].

In the treatment of choledocholithiasis, endoscopic invasive or surgical treatment are used. As part of invasive endoscopic treatment, ERCP is performed with sphincterotomy, which is the method of choice, ensuring cure in 90% of patients. During the procedure, deposits from the bile ducts are removed through the dissected papilla and into the duodenum using an endoscope [9].

Extracorporeal shock-wave lithotripsy is an alternative method of crushing deposits found in the common bile duct when mechanical lithotripsy fails during ERCP [10].

When all of the above methods fail, the prosthesis is implanted into the common bile duct [6].

Surgical treatment of choledocholithiasis is called choledochotomy. Everyone who has been diagnosed with the disease, and endoscopic treatment is not possible or ineffective, is eligible for this type of treatment [6].

Surgical treatment of cholecystolithiasis is based on cholecystectomy. It involves removing the gallbladder along with the stones it contains, and ensuring that deposits do not remain in the bile ducts. There are two methods of cholecystectomy - the classic "open" and laparoscopic one. Currently, the laparoscopic method is performed more often, due to low invasiveness. It happens, however, that there are contraindications for laparoscopic cholecystectomy and then the procedure is performed using the classical method [11,12].

Aim of the study

The study aims to show the nursing problems occurring in the care of a patient diagnosed with cholecystolithiasis, who is treated by laparoscopic surgery.

Methods and materials

An individual case study method was used in the study. Research techniques such as observation, nursing interview, documentation analysis and measurement were used. Research tools used for the study include: Individual Nursing Care Card, the Visual Analogue Scale - VAS and the Apfel Score to assess the risk of postoperative nausea and vomiting.

The examinations were performed at the Clinic of General and Transplant Surgery and Nutritional Treatment, the Independent Public Clinical Hospital No. 4 in Lublin.

The subject of the examination is a patient diagnosed with cholecystolithiasis. Empirical data was collected after having informed the patient about the examination and having obtained a conscious consent from him. The process of collecting the information and observing the patient took place during his three – day hospitalization period.

Description of the studied case

The study included a male patient, aged 46, living in the city with his partner. The patient's housing and financial situation is very good, and there are no family problems. The man has concomitant health issues such as hypertension and hemangioma of the brain. He is on regular medication.

For about 2 months, the patient felt pain in the right hypochondrium, radiating to the spine. The pain was accompanied by nausea and abdominal bloating, which most often occurred after eating foods high in fat, hard to digest, and fried, as well as after alcohol and soft or carbonated drinks intake. The patient concerned about the ailments saw his general

practitioner and was referred to an abdominal ultrasound examination. The examination showed a 7 – cm liver enlargement. Following that, further diagnostics was commissioned, which revealed deposits in the gallbladder.

The patient was admitted to the ward as planned for cholecystectomy. The general condition of the patient on admission was very good, he did not complain of any major pain. A number of laboratory tests and another abdominal ultrasound examination were performed in the ward. The tests confirmed the diagnosis of cholecystolithiasis. The patient was qualified for laparoscopic cholecystectomy. The patient showed signs of fear and anxiety due to hospital stay and planned surgery.

On the second day of hospitalization, the gallbladder was removed under general anesthesia, which went without any complications.

After the surgery, the patient was taken to the postoperative intensive care room with autopsychic and allopsychic orientation.

During the surgery, incisions were made in the abdominal cavity, from which a Redon drainage draining blood secretion was led out with one incision. There were skin sutures placed on the incisions. Dry dressings were placed on the remaining wounds.

About an hour after the surgery, the patient complained of pain, nausea and vertigo. In order to alleviate the discomfort, an analgesic was given following the doctor's order. Controlled patient's vital signs within the physiological norm, mood and well – being balanced. The patient slept restlessly.

Findings

Based on the collected data, monitoring, performed measurements, nursing interview and documentation analysis the following diagnoses were made:

Diagnosis no. 1: Patient's anxiety caused by hospitalization in the surgical ward.

Aim of care: Minimizing anxiety and providing support for patient during hospitalization.

Care plan:

- Talking to the patient, explaining the purpose of hospitalization;
- Familiarizing the patient with the ward's topography;
- Allowing contact with his family and relatives;
- Presenting medical staff and the other patients to the patient;
- A thorough discussion of each medical procedure performed on the patient.

Results: Patient's anxiety decreased.

Diagnosis no. 2: Sleep disturbance due to anxiety about the upcoming surgery.

Aim of care: Reducing anxiety and improving the patient's sleep comfort.

Care plan:

- Providing the patient with information about the upcoming surgery;
- Allowing contact with the anesthesiologist and the doctor performing the procedure in order to talk about the procedure and clarify issues that bother the patient; - Ensuring quiet, peace and an appropriate microclimate of the room;
- Ensuring contact with family and psychologist when needed; - Administering pharmacotherapy following the doctor's order if needed.

Results: Patient's anxiety disorder was minimized and sleep comfort improved.

Diagnosis no. 3: Postoperative wound pain caused by disrupting tissue continuity as well as the presence of drainage and skin sutures.

Aim of care: Minimizing the patient's pain.

Care plan:

- Monitoring pain (*type, intensity, duration, location*);
- Administering pharmacotherapy at regular intervals following the doctor's order;
- Calming the patient down and explaining the cause of pain;
- Applying measures to raise the pain threshold (*ensuring peace, quiet and rest*);
- Control of drain tube and skin sutures to exclude pathological changes.

Results: After the planned action had been implemented, the patient's pain decreased.

Diagnosis no. 4: Presence of nausea and vertigo in the postoperative period associated with the use of general anesthesia.

Aim of care: Minimizing the presence of ailments.

Care plan:

- Putting the patient in a semi-Fowler position;
- Monitoring the general condition of the patient;
- Giving the patient a kidney-shaped basin and lignin if necessary;

- Ensuring freshness in the room and peace for the patient; - Providing pharmacotherapy following the doctor's order.

Results: The patient did not vomit, nausea and vertigo subsided after resting.

Diagnosis no. 5: Risk of postoperative wound infection due to disruption of tissue continuity.

Aim of care: Minimizing the risk of infections of the operated site until it heals

Care plan:

- Observation of the postoperative wound and skin in the wound area;
- Monitoring wound healing and secretion;
- Systematic dressing change, wound cleaning and skin care in the wound area;
- Informing the patient about worrying symptoms of inflammation and the necessity to report them;
- Skin suture control.

Results: Clean wound, dry dressings changed. The patient shows no symptoms of postoperative wound infection.

Diagnosis no. 6: The risk of bleeding or hemorrhage due to the presence of drain tube led out of the postoperative wound.

Aim of care: Prevention of life – threatening conditions by early detection of bleeding or hemorrhage symptoms in the postoperative period.

Care plan:

- Monitoring of patient's blood pressure, pulse and breathing pattern;
- Control of the wound dressing;
- Observation of quality, color and amount of secretion in the drain tube;
- Monitoring the patient's well-being and awareness.

Results: No bleeding appeared in the patient.

Diagnosis no. 7: Incomplete knowledge of nutrition after removal of the gallbladder.

Aim of care: Providing the patient with information and recommendations that should be followed.

Care plan:

- Talking to the patient about the principles of nutrition after having his gallbladder removed;
- Allowing the patient to contact a dietitian;
- Presenting sample menus to the patient.

Results: The patient was familiarized with the principles and nutritional recommendations that he should follow after having the gallbladder removed.

Conclusions:

1. The patient after the surgery of the gallbladder removal is affected by pain caused by disruption of tissue continuity, nausea, vertigo and anxiety appearing mainly in the evening and making it difficult for the patient to sleep soundly.
2. Among the patient's prevalent problems are fear and anxiety about concern for one's own life and health, the period of hospitalization and recovery as well as their insufficient knowledge.
3. The patient does not have sufficient knowledge and skills to comply with recommendations for a lifestyle resulting from having the gallbladder removed.
4. After the surgery the patient is affected by many emotions, mainly fear and anxiety about his life and health, resulting from the new life situation. At present, the patient's emotional condition is satisfying.

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