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Professional Nursing Care Applied to The Individual Diagnosed with Crohn's Disease: A Case Report

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Abstract:
Crohn's disease, which is one of the inflammatory bowel diseases, is an intestinal disease with acute exacerbations and can involve any part from the mouth to the anus. The objective of this case report was to prepare a nursing care plan for a patient diagnosed with 'Crohn's Disease' by using the nursing diagnoses in the North American Nurses Diagnosis Association (NANDA) classification system. The patient was a female, married, a high school graduate, and a 36-year-old housewife. The patient was diagnosed with Crohn's disease as a result of laboratory and radiologic imaging in a hospital where she applied with severe abdominal pain in 2006. The patient received medical treatment for about two years and overcame the attack period of the disease. On April 11, 2022, the patient went to the Emergency Department of a university hospital with abdominal pain and fatigue. The patient's detailed laboratory findings and radiologic imaging were obtained, and she was admitted to the Gastroenterohepatology Service. It is very important that quality health care services are provided to individuals with poor health status by nurses, who are among the leading health professionals. It was observed that planning the patient's care according to the North American Nurses Diagnosis Association (NANDA) Classification System and analyzing the data according to the sub-dimensions of the model provided quick solutions for the patient's problems and systematic nursing care for the patient.

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INTRODUCTION

The inflammatory bowel diseases are chronic diseases of unknown etiology, often characterized by diarrhea and abdominal pain (Özden, 2013; De Souza and Fıocchı, 2016; Gomollon et al., 2017). The Crohn's disease, which is one of the inflammatory bowel diseases, is also an intestinal disease that is characterized by acute exacerbations (Cosnes et al., 2002). The disease may involve any part from the mouth to the anus (Tozun et al., 2009). Although Morgagni first introduced the diagnosis in 1791, it was introduced and defined in the closest way to the present by Crohn et al. in 1932 (Ginzburg, 1986). The incidence of the Crohn's disease is gradually increasing today (Tomoko et al., 2017). This increase is in parallel with the industrialization (Pituch-Zdanowska et al., 2015). The incidence in adults is, 1-6/100.000 and prevalence is 10-100/100.000; the incidence of the Crohn's disease in children is, 0.2- 3.1/100.000 and the prevalence is, 16.6/100.000. The Crohn's disease is more common in the individuals between the ages of 20 and 30 (Molodecky et al., 2012). The etiology of the Crohn's disease is not clearly known (Feuerstein and Cheifetz, 2017). However, recent studies have demonstrated that it is related to the presence of similar inflammatory diseases in the family (Tysk et al., 1988), genetic

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factors (Khor et al., 2011), smoking (Higuchi et al., 2012; Prideaux et al., 2012), physical activity (Khalili et al., 2013; Wanner et al., 2016) and nutritional level (Ananthakrishnan et al., 2012; Del Pinto et al., 2015). The aim in the Crohn's disease is to eliminate the symptoms and signs of the disease. There is no known certain treatment for the Crohn's disease. Medical and surgical treatments are offered to eliminate the symptoms. Aminosalicylates (Sebastian et al., 2018), steroids (Cushing and Higgins, 2021), immunomodulators (Feuerstein and Cheifetz, 2017), azathioprine and mercaptopurine (McDonald et al., 2014), methotrexate, biological treatments (Sandborn et al., 2007) and various antibiotics (Gomollon et al., 2017) are used in the medical treatment. As well as the medical treatment requested by the physician, the professional care provided by the nurse is very important (Yücel et al., 2020). The World Health Organization (WHO) defines health as 'a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity' (WHO, 2019). Nurses are the health professionals who work for the physical, social and mental well-being of individuals. The ICN definition of nursing is, "A professional group that helps to protect and improve the health of the individual, the family and the society and provides healing and rehabilitation in case of illness". In other words, nursing is a professional group based on philosophy, theory, practice, and research (Velioğlu, 2012). In 1976, the North American Nurses Diagnosis Association established the nursing classification system so that nurses, who are the main health professionals, can speak a common language (The Office of National Coordinator for Health Information Technology, 2017). Nurses are the health professionals who are primarily responsible for carrying out and maintaining the procedures in providing treatment for patients (Soydan et al., 2020).

STUDY DESIGN

In this case report, it was aimed to prepare a nursing care plan for a patient diagnosed with 'Crohn's Disease' by using the nursing diagnoses in the North American Nurses Diagnosis Association (NANDA) classification system. In order to scientifically use the data, consent was received from the patient, the related physician and the institution.

PATIENT INFORMATION

Sociodemographic Characteristics

The patient was 36 years old, female, married, high school graduate and housewife. She had never smoked or consumed alcohol throughout her life. In her family history, her mother and sister were diagnosed with ulcerative disease at an unknown date. The patient had hypermetropia and wears glasses.

Past Medical History

The patient was diagnosed with the Crohn's disease as a result of the laboratory and the radiologic imaging, in 2006, in a hospital where she applied with severe abdominal pain. The patient received medical treatment for about two years and overcame the attack period of the disease. In 2008, the patient went to a hospital with complaints of fatigue and muscle weakness and was diagnosed with osteoporosis. The patient was routinely followed up due to the diagnosis of osteoporosis, and the diagnosis was changed to Ankylosing Spondylitis in 2015. The patient was allergic to the radiopaque material and metronidazole.

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Current Medical History

The patient applied to the Emergency Department of a university hospital on April 11, 2022 with abdominal pain and fatigue. Detailed laboratory findings and radiological imaging were obtained and the patient was admitted to the Gastroenterohepatology Service. The medical diagnosis of the patient was Crohn's disease. The patient was prescribed antibiotic tablets, stomach protector intravenous, formula intravenous and blood thinners subcutaneous. It was observed that the patient complied with the treatment plan and frequently asked questions about her disease and treatment to the healthcare team members.

The Physical Evaluation and The Nursing Diagnoses of the Patient in the North American Nurses Diagnosis Association (NANDA) Classification System

1. Respiratory System Evaluation
   The patient's respiration was normal. Respiratory rate was 22/min and saturation value was 98/min.

2. Cardiovascular System Evaluation
   The patient had no cardiovascular disease. Blood pressure was 110/60 mmHg and pulse rate was 78/min.

3. Gastrointestinal System
   The patient had a mild abdominal pain. Pain scale score was 2. (Pain scale score evaluation; 0 points, no pain, evaluated once a day; 1-2 points, mild pain, evaluated every 6 hours; 3-4 points, a little much pain, evaluated every 4 hours; 5-6 points, moderate pain, evaluated every 2 hours; 7 and above points, severe pain, evaluated every hour) (Van et al., 2012). The patient had diarrhea and the number of defecations was 8-10/day.
   Nursing Diagnosis: 'Diarrhea' due to the increased intestinal motility (Crohn's Disease)
   Objective: To ensure that the patient's elimination continues at a normal level
   Interventions: Daily defecation process and daily weight were tracked. Fluid replacements were provided upon the physician order. The bowel sounds of the patient were listened and recorded at regular intervals (Bowel sounds: 10/min). The skin turgor was tracked at regular intervals and the medications in the medical treatment were checked for causing diarrhea. Pulpy food was added to the patient's diet and samples of pulpy food she can access were given. No adverse condition was detected.

4. Nutrition Assessment
   The patient did not want to eat. Body mass index was 23 kg/m2. Oral assessment guide was 9. (Oral Evaluation Guide is a guide in which voice, swallowing, lips, tongue, saliva, oral mucosa, gums and teeth are evaluated from 1 to 3. A total oral mucosa score between 8-14 is considered as risk of oral mucous membrane deterioration and a score between 14-24 is considered as oral mucous membrane deterioration) (Eilers et al., 1988; Ames et al., 2011).
   Nursing Diagnosis: Nutritional Imbalance due to nutrition less than required and absence of appetite: Nutrition Less than Required
   Objective: To ensure that the patient gets the sufficient nutrition
   Interventions: The nutritional status of the patient was evaluated. A diet suitable for the patient was determined in collaboration with the dietician. The patient was recommended to consume calcium and potassium-rich foods. Nutritional supplements were given intravenously upon

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physician's order to the patient whose oral nutrition was not sufficient. The patient's weight was regularly tracked every morning.

Nursing Diagnosis: Risk of Oral Mucous Membrane Disruption due to the insufficient and irregular nutrition of the patient

Objective: To preserve the integrity of the oral mucous membrane of the patient and to eliminate the risk factors

Interventions: Oral mucous membrane was evaluated using the oral assessment guide. The oral evaluation guide score was 9. (Oral evaluation guide score is between 8-24. If the score is 8, oral care should be planned as 3*1,9-19 6*1 and if the score is > 20, it should be planned as 12*1). The patient was instructed to brush her teeth three times a day with a soft bristle toothbrush. In addition to toothbrush and toothpaste, she was informed about the importance of using oral hygiene products such as dental floss and mouthwash solutions. No deterioration in the oral mucous membrane was observed.

5. Musculoskeletal Evaluation

The patient had fatigue and loss of strength. The patient, who stated that, she often took walks with her husband before the hospitalization, was also able to perform her daily life activities on her own without support. The 'Itaki Fall Risk Scale' was performed to determine the patient's risk of falling. The scale score of the patient was found to be between 4-5 during her hospitalization in the clinic. (The Itaki fall risk scale is 51 points in total. Below 5 is considered low risk, and 5 and above is considered high risk) (SHGMKALİTEDB, 2021).

Nursing Diagnosis: Fatigue due to Disease (Osteoporosis)

Objective: To minimize the fatigue of the patient

Interventions: Energy planning suitable for the hospital environment was prepared together with the patient. The patient was encouraged to exercise at certain intervals according to the hospital conditions. It was observed that, the patient took walks with her husband in the hospital garden during the day. The patient was informed about often consuming small amount of food, rich in calcium and consuming a lot of fluid.

Nursing Diagnosis: Risk of Falling due to the Disease

Objective: To minimize the patient's risk of falling

Interventions: The 'Itaki Fall Risk Scale' was applied to the patient at regular intervals to determine the risk of falls. The patient's itaki fall risk scale score was 5 when she was first hospitalized and the itaki fall risk scale score was between 4-5 during her hospitalization in the service. A 'Four Leaf Clover' symbol indicating that the patient was at risk of falling was attached to the head of her bed. The functionality of the bed railings was checked and they were kept closed during the hospitalization of the patient. Not many items were left around the bed and a safe environment was provided for the patient. The patient did not fall during the follow-up period in the service.

6. Neurological Assessment

The patient was oriented to place, time and person, conscious and cooperative. Her Glasgow Coma Scale Score was 15. (The Glasgow Coma Scale is a 15-point scale and is used for the assessment of the state of consciousness of individuals. The scoring of the scale is as follows; 3-7 points: significant neurological damage (deep coma or death), 8-11 points: moderate neurological damage, 12-15 points: mild neurological damage (Kondo et al.,2011).

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7. Eye/Ear/Nose Evaluation
   No problem was detected in the sensory organs during the physical assessment of the patient.

8. Genitourinary System Evaluation
   During the physical and verbal assessment of the patient, no problem was observed in the genitourinary system.

9. Skin Assessment
   There was no deterioration on the skin and the tissue of the patient. The Braden Scale for Pressure Ulcer Assessment score was 20 (The Braden Scale for Pressure Ulcer Assessment is a scale in which individuals' sensory perception, skin moisture, mobility, physical activity, nutrition and friction-pressure were assessed as completely limited (1), very limited (2), somewhat limited (3) and oriented (4). It is assessed in three parts as low risk (Total score 15-16 and 15-18 for those over 75 years of age), moderate risk (Total score 13-14), and high risk (Total score 12 and >) (Ayello and Braden,2002).

10. Emotional Assessment
    The health professional team observed that, the patient was calm during her hospitalization in the service. The patient frequently asked questions about her illness and communicated with the healthcare team members.
    Nursing Diagnosis: Lack of Knowledge about the Disease
    Objective: To ensure that the patient is informed about the disease
    Interventions: The disease and all the interventions were explained to the patient in an understandable, plain language. The patient was informed prior to each intervention. She was informed about her treatment. The patient was encouraged to ask questions. It was observed that, she frequently asked questions to other team members about her disease and treatment, during her stay in the service.

11. Sleep Assessment
    The patient stated that, she slept approximately 7 hours/day and 1-1.5 hours during the day before her hospitalization. She stated that, she experienced sleep disorder during her hospitalization.
    Nursing Diagnosis: Sleep Disorder Due to Hospitalization and Daytime Sleeping
    Objective: To ensure that the patient gets regular and enough sleep
    Interventions: The sleeping hours of the patient were regulated. Daytime sleep was restricted and the patient was encouraged to sleep at night. The time of the medical interventions was planned so as not to interfere with the patient's sleep time.

DISCUSSION

In this case report, a patient diagnosed with 'Crohn's Disease' was cared for using the nursing diagnoses in the North American Nurses Diagnosis Association (NANDA) classification system. The most common signs and symptoms of Crohn's disease are abdominal pain, nausea and diarrhea (Wedrychowicz et al., 2016). Depending on the severity of the diarrhea, patients may experience potassium, calcium, magnesium and phosphorus deficiency (Hou et al., 2014). It is important to properly supplement the nutrition the patient needs. Bacteria in the intestines increase during the acute Crohn's period. In this case, individuals should be given foods low in fiber (Pituch-

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Zdanowska et al., 2015). The patient with 'diarrhea' complaint was tracked in terms of defecation frequency, which was 8-10/day. On the fourth day of the patient's admission to the clinic, the defecation frequency was recorded as 6-7/day and bowel sounds were recorded as 6/min. The body mass index of the patient who was diagnosed with 'malnutrition' was evaluated at regular intervals (found to be 23-24 kg/m2). The problem could not be solved completely, but the patient's appetite and oral nutrition increased. Intravenous formula treatment, which was planned when the patient was first admitted to the clinic, was interrupted and the patient was encouraged to feed orally in small amounts and more frequently. The patient's medical treatment was not left overnight for the diagnosis of 'Sleep Disorder'. Medical treatment was given during the daytime. The daytime sleep of the patient was restricted. Thus, the patient verbally stated that, her sleep quality improved on the third day, during her stay in the clinic. As she was diagnosed with 'Lack of Knowledge', she was encouraged to ask questions to the healthcare teams and was observed to frequently ask questions. The patient was emotionally calm. In terms of 'Fall Risk', the patient was evaluated with the Itaki Fall Risk Scale at certain intervals. The patient did not fall during her hospitalization in the clinic. Crohn's disease is characterized by swelling, aphthae, ulcerations and lesions on the lips and cheeks in the mouth during the active period (Dudeney and Todd, 1969; Bernstein and McDonald, 1978; Li et al., 2015). The patient who was diagnosed with the 'Risk of Deterioration of Oral Mucous Membrane' was evaluated based on the Oral Evaluation Guide. The patient was regularly provided with an oral care kit. No deterioration of the oral mucous membrane was observed during her hospitalization in the clinic.

CONCLUSION

It is very important that the health care services are provided to the individuals with infirmity in a quality manner by nurses, who are the main health professionals. It was observed that, planning the patient's care according to the North American Nurses Diagnosis Association (NANDA) Classification System and analyzing the data according to the sub-dimensions of the model, solved the patient's problems in a short time and the nursing care given to the patient was systematic.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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