Case Report

Nursing Care Process of a Patient with a Diagnosis of Systemic Lupus Erythamatosus: A Case Report

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Abstract

Systemic lupus erythematosus is an autoimmune disease that, although predominantly seen in young adults and more frequently in women, can occur at any stage of life. The disease presents with various symptoms, and organ involvement is common. One of the most frequently observed organ involvements is lupus nephritis. Therefore, nurses must comprehensively assess patients with systemic lupus erythematosus and implement appropriate nursing interventions for identified issues. In this study, the health data of our 32-year-old female patient were collected based on Gordon's Functional Health Patterns model. A nursing care plan was developed according to the nursing diagnoses of NANDA I Taxonomy II and the Nursing Intervention Classification (NIC) for the identified problems.

Keywords: Nursing, Models, Systemic lupus erythematosus

Introduction

Systemic lupus erythematosus (SLE) is a chronic connective tissue disease of unknown etiology characterized by autoimmune features and accompanying immunological disorders, affecting multiple organs and systems. The disease predominantly occurs in women of childbearing age, particularly between the ages of 15 and 35, while its occurrence is rare in individuals over the age of 50 (Sofulu et al., 2017). Genetic and environmental factors influence disease activity, its progression, and quality of life. In recent years, there has been a threefold increase in the incidence of the disease due to diagnoses made during periods of mild disease activity (Mahmoud et al., 2018; Pons-Estel et al., 2010). Patients' clinical courses exhibit periods of remission and exacerbations of varying durations. In the preclinical phase of the disease, there is an increase in autoantibody production. During the clinical phase, patients present with various symptoms such as fever, loss of appetite, fatigue, weight loss, and manifestations related to organ involvement (Bertsias et al., 2012). Renal involvement is one of the most significant factors affecting morbidity and mortality in SLE patients (Petr et al., 2012).

Lupus nephritis (LN) typically develops early in the course of the disease. Clinically, significant kidney disease emerges in half of the patients with SLE, and approximately 10% of those with LN progress to end-stage renal disease. The most common abnormality observed in patients with lupus nephritis is proteinuria. Other common clinical findings include hematuria, impaired kidney function, nephrotic-range proteinuria or nephrotic syndrome, and hypertension. The diagnosis of the disease is confirmed by a kidney biopsy.

Kidney biopsy is crucial for identifying renal involvement, excluding other causes of kidney damage, determining the histopathological subtype of LN, and assessing disease activity (Bomback et al., 2010). When patients with lupus nephritis undergo kidney replacement therapy, the disease generally follows a more stable course, although flares (both renal and extra-renal) can still occur but are less frequent. Therefore, transplantation should not be delayed and can be safely performed even in the presence of isolated serological activity (Unal et al., 2018).

Nurses providing care for patients with systemic lupus erythematosus (SLE) play crucial roles in coordinating and maintaining communication for the comprehensive treatment and care administered. They are responsible for monitoring the patients' overall condition, providing psychological support to patients and caregivers, offering education based on individual needs, and managing symptom control (Gordon, 2003). In fulfilling these roles, nurses utilize various models and theories. Gordon's Functional Health Patterns (FHP) Nursing Care Model provides a holistic approach that allows for a comprehensive evaluation of patients in the bio-psycho-social dimensions. The model addresses individuals' needs across eleven functional areas, facilitating the systematic and standardized collection of information and the provision of nursing care (Herdman & Kamitsuru, 2018).

In this study, the comprehensive care needs of a patient diagnosed with SLE were identified using the Functional Health Patterns (FHP) model. The aim was to develop a nursing care plan based on the identified NANDA I Taxonomy II nursing diagnoses and the Nursing Intervention Classification (NIC).

Case Presentatıon

Ethics: Written consent was obtained from the patient for the study.

Demographic Information

Ms. R.O. is a 32-year-old, single woman with no children, living with her parents. She has temporarily halted her postgraduate education due to health problems and is currently not working. She has been undergoing hemodialysis treatment three times a week for the past two years. In 2015, after experiencing intermittent high fever, significant weight loss (15 kg), and vomiting, she was admitted to the hospital following a fainting episode. Upon investigation, she was diagnosed with SLE with organ involvement. Prior to this, she had not undergone any surgeries. Due to SLE complications, she has been intermittently hospitalized for four years. She has allergies to dust, detergents, and pollen. She has no history of smoking or alcohol use. Her family history includes her mother having hypertension and her father having diabetes.

Vital Signs

- Blood Pressure: 85/60 mmHg

- Pulse: 84 bpm

- Respiration: 18 breaths/min

- Body Temperature: 36.4°C

Assessment According to Gordon's Functional Health Patterns Model

1. Health Perception and Health Management: Ms. R.O. generally perceives her health as average or below average. She states that she regularly takes her medications and attends her health check-ups. A renal transplantation from her father was planned, but it was postponed due to high infection parameters. Ms. R.O. mentioned that the surgery had also been postponed previously due to another complication.

2. Nutritional-Metabolic Status: Ms. R.O. is 159 cm tall and weighs 44.5 kg, with a Body Mass Index (BMI) of 17.4 kg/m². She reports experiencing nausea and vomiting, leading to a loss of appetite. She typically consumes liquid and soft foods and eats two meals a day.

3. Elimination: Ms. R.O. reports having bowel movements twice a day, which are of soft consistency. She does not have urinary output. Her entry weight for dialysis is determined to be 45 kg.

4. Activity/Rest: Ms. R.O. mentions that she does not engage in regular exercise but does short walks. She experiences leg cramps and pain, particularly at night, and feels fatigued and weak during the day.

5. Sleep and Rest Pattern: Ms. R.O. reports frequent awakenings at night due to leg cramps. She also mentions taking short naps during the day but still feels tired and fatigued.

6. Cognitive-Perceptual Pattern: Ms. R.O. expresses experiencing vision problems due to organ involvement. During periods of fatigue, she mentions a decreased interaction with her surroundings and intolerance to household noises.

7. Self-Perception/Self-Concept Pattern: Ms. R.O. expresses that the disease process has greatly affected her and her family, leading to feelings of anger and resentment towards family members. She mentions encountering SLE patients who have died during hospitalization and feeling that she herself is very close to death. She also states that she no longer values herself and her body as much as she used to.

8. Role-Relationship Pattern: Ms. R.O. states that she had to quit school and her job due to the illness. She mentions that her parents have been supportive during her treatment process. However, she also indicates that shortly after receiving the diagnosis, she got divorced from her spouse. She expresses that the divorce process has further complicated the treatment stages and that she feels emotionally alone during this period.

9. Sexuality and Reproductive Pattern: Ms. R.O. mentions that she does not have an active sexual life and experiences regular menstrual cycles.

10. Coping/Tolerance of Stress Pattern: Ms. R.O. mentions receiving psychological therapy during her treatment and the divorce process. She states that her family members have shown necessary care during these processes. However, she also expresses that she is more irritable and impatient than she used to be and experiences unnecessary bursts of anger.

11. Belief and Values Pattern: Ms. R.O. expresses the acknowledgment of the existence of death and the inevitability of it, stating that she does not have any religious rituals.

NANDA Nursing Diagnoses and NIC Nursing Interventions of the Case

Nursing diagnosis 1: <u>Ineffective Health Management</u> (NANDA Domain: 1, Class: 2, Diagnosis code: 00078 (Buleckhek et al., 2017; Ozkaraman & Uzgor, 2019).

Cause: Difficulty in reducing risk factors for disease-related complications.

Objectives/expected patient outcomes: Reducing risk factors for complications, no complications.

Nursing Interventions:

- They were informed that they should stay away from people with active upper respiratory tract disease and pets.

- Explanations were made to the patient and family members about hand washing, personal hygiene and cleaning of the food they take.

- It was stated that the patient should take care of her skin health, and that she could take necessary precautions such as cutting her nails short and using lotion for itching to maintain skin integrity.

- The patient and her family were informed about the importance of protection against infections.

- In case of fever, chills, redness at the catheter site, it was stated that she should apply to a health institution.

- They were informed that they should have regular health checks (such as eye examinations) (Burucu, 2019; Du et al. 2018; Özel & Argon, 2015).

Nursing Diagnosis 2: <u>Nutritional Deficiency</u>: Nutrition Less than Body Requirements (NANDA Domain: 2, Class: 1, Diagnosis code: 00002) (Buleckhek et al., 2017)

Causes: Nausea, vomiting, loss of appetite

Objectives/expected patient outcomes: Ensuring adequate nutrition of the patient, relief of nausea and vomiting

Nursing interventions:

- The patient was informed about the importance of adequate and balanced nutrition.

- She was informed that she should follow a sodium-restricted diet, avoid packaged foods and drink the amount of fluid recommended by her physician.

- In order to prevent inflammation, the patient was informed to consume more fruits and vegetables, nuts, fish and olive oil.

- It was stated that she should avoid very hot and cold meals and should not prefer oily and spicy foods.

- She was informed that she should take her favorite foods little by little and often.

- The patient was instructed to sit in a semi-sitting position after meals.

- Information was given about the importance of oral care after meals.

- The patient was informed that it would be appropriate to use antiemetic drugs before meals according to the doctor's order during periods of nausea (Burucu, 2019; Du et al. 2018; Ozel & Argon, 2015).

Evaluation: She stated that her nausea and vomiting decreased after the medication but her anorexia persisted. No weight gain was observed.

Nursing Diagnosis 3: Activity Intolerance (NANDA Domain: 4, Class: 2, Diagnosis Code: 00092) (Buleckhek et al., 2017)

Causes: Cramps, pain, fatigue, not getting enough sleep at night

Objectives/expected patient outcomes: No difficulty in performing activities, being able to perform activities within the appropriate time interval

Nursing interventions:

- She was informed about planning her daily tasks in order of importance.

- The importance of resting at certain intervals during the day was explained.

- Information was given about the importance of movement as much as the patient could tolerate.

- The patient and her family were informed about the importance of nutrition and night sleep.

- The patient was instructed that she could apply heat to reduce muscle spasms and pain.

- It was explained that she should avoid tools that come into contact with her skin during hot application and that she should take the necessary precautions in advance to avoid skin burns.

- Explanations were made about the importance of using the medication recommended by the physician at the appropriate dose and time to eliminate pain.

- The patient's relatives were informed about the need to support the individual while performing daily life activities (Burucu, 2019; Du et al. 2018; Ozel & Argon, 2015).

Evaluation: She stated that she continues to experience fatigue while performing activities of daily living.

Nursing Diagnosis 4: Trauma Risk (NANDA Domain: 11, Class: 2, Diagnosis Code: 00155) (Buleckhek et al., 2017)

Causes: Weakness, impaired sleep quality, prevention of fluid-volume replacement, hemodialysis treatment

Objectives/expected patient outcomes: Patient protection from trauma

Nursing interventions:

- Vital signs were taken when the individual arrived at the hemodialysis unit.

- Dry weight was measured before hemodialysis treatment.

- During the treatment, the edges of the beds were lifted and the patient was given an appropriate position.

- After hemodialysis treatment, vital signs were taken and the patient was allowed to rest for a while.

- The individual and her family were informed that necessary environmental arrangements should be made against falls and injuries at home.

- The individual was informed to get support from assistive devices when he/she felt severe pain and weakness.

- The family was informed that the necessary environmental arrangements (noise, adjusting the ambient temperature, using dim light, etc.) should be made for the individual to get enough sleep.

- Information was given about applications such as massage and hot application for cramps that wake up from sleep (Burucu, 2019; Du et al. 2018; Ozel & Argon, 2015).

Evaluation: The patients and their relatives stated that there are areas that need to be organized in the home environment in line with the information, and gave feedback that they should take precautions against traumas that may develop both at home and in the hospital environment.

Nursing Diagnosis 5: <u>Altered Sleep Pattern</u> (NANDA Domain: 4, Class: 1, Diagnosis Code: 00198) (Buleckhek et al., 2017)

Causes: Cramps, nausea and vomiting

Objectives/expected patient outcomes: Increased sleep hygiene, elimination of cramps

Nursing interventions:

- The patient and her family were informed about the appropriate organization of the environment to ensure sleep order (room temperature, lighting).

- It was explained that sleep periods should be kept short during the daytime.

- An individual-specific activity program was organized during the day.

- It was explained that she should consume liquids containing caffeine during the day and that she can use herbal teas that provide relaxation in the evening.

- It was recommended to do activities such as reading books and listening to music before going to bed.

- The individual and her family were informed about analgesics, anti-cramp and supportive medications prescribed by the physician (Burucu, 2019; Du et al. 2018; Ozel & Argon, 2015).

Evaluation: She stated that her nighttime sleep hours increased.

Nursing Diagnosis 6: <u>Fear of Death</u> (NANDA Domain: 9, Class: 2, Diagnosis code: 00147) (Buleckhek et al., 2017)

Causes: Complications due to SLE, death of individuals who met in the hospital environment with the same diagnosis, presence of chronic disease, fear of death due to unknowns about treatment

Objectives/expected patient outcomes: Enabling the individual to express their feelings openly

Nursing interventions:

- A reassuring communication was established for the patient to openly express his/her feelings, thoughts and concerns and to share her feelings.

- She was allowed to express her feelings and thoughts about death. It was observed that she was especially affected by the death of SLE patients she met in the hospital environment.

- It was observed that her eyes filled up and she had a tearful expression while talking about death.

- The physician was contacted for psychological support and an appointment was scheduled.

- The patient's relatives were informed about the importance of supporting the individual to contribute positively to his/her feelings and thoughts.

- She was informed about the activities (painting) that she previously enjoyed doing and guided (Burucu, 2019; Du et al. 2018; Ozel & Argon, 2015).

Evaluation: It was observed that the patient and her relatives were interested in receiving psychological support.

Nursing Diagnosis 7: <u>Ineffectiveness in Role Performance</u> (NANDA Domain: 7, Class: 3, Diagnosis Code: 00055) (Buleckhek et al., 2017)

Causes: Presence of chronic disease, treatment process, complications arising from the disease and treatment

Objectives/expected patient outcomes: To enable the person to express his/her feelings and thoughts

Nursing interventions:

- The reasons (pain, cramps, fatigue) that would cause ineffectiveness in the individual's role performance were learned and the patient and family members were informed about the solutions.

- The individual was given the opportunity to express his/her feelings and thoughts comfortably.

- Information was given about activities that would reduce the stress and anxiety level of the individual.

- The hobbies that the individual likes to do were discussed and it was stated that he/she should make a plan to realize them within the framework of a daily program.

- Family members were informed about the need to support the individual's household chores as much as possible and to spare time for themselves (Burucu, 2019; Du et al. 2018; Ozel & Argon, 2015).

Evaluation: It was observed that she had difficulty in fulfilling her roles.

Discussion

Systemic lupus erythematosus is a chronic disease that affects the individual's life in different aspects, especially in the young female population. Although the effects of the disease on systems vary from patient to patient, lupus nephritis is one of the most common organ involvement. Since SLE causes organ involvement, it decreases the quality of life of the individual and increases the cost of treatment and care.

In this study, the nursing care process of a 32-year-old woman who developed lupus nephritis was discussed. In line with the data obtained by using the FSS model in our case, nursing diagnoses such as ineffective health management, nutrition less than body needs, activity intolerance, trauma risk, change in sleep pattern, fear of death, ineffectiveness in

role performance were determined. In the literature research, it was determined that sleep disorders and anxiety experienced during the SLE disease process increase the fatigue level of the patient and reduce the quality of daily life of the individual (Muz & Eglence, 2013).

In another study, it was reported that as the pain levels of SLE patients increased, their fatigue levels also increased and their daily life activities were negatively affected (Ozel & Argon, 2015). As a result of system involvement of SLE, different complications develop in individuals according to the organ involved and treatment regimens change accordingly. The treatment regimens also affect the self-care of the patients. In this study, our patient received dialysis treatment three days a week. It was observed that self-care was affected due to the treatments received and complications developed, and appropriate nursing interventions were planned for the problems arising accordingly. Nurses caring for SLE patients should evaluate individuals with a holistic perspective in care management.

Conclusion: SLE is an autoimmune disease that frequently occurs in women between the ages of 20-40, and while symptoms such as weight loss, weakness and fatigue manifest themselves at the onset of the disease, organ involvement occurs in the progressive processes. Kidney involvement is among the most common organ involvement. Nurses should observe and evaluate an individual diagnosed with SLE in detail during diagnosis, treatment and symptom management. The use of nursing models in the detailed evaluation of patients will contribute to the multidimensional evaluation of individuals, the development of patients' self-management, the improvement of quality of life, and the reduction of health care costs.

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