

Special Article

Nursing Care According to Activities of Daily Living in COVID-19 Pneumonia: A Case Report

Saatci Gamze

Nurse-Master student, Kirsehir Ahi Evran University Training and Research Hospital, Turkey

Unsal Ayla

Prof. Dr, Kirsehir Ahi Evran University, Faculty of Health Sciences, Turkey

Correspondence: Saatci Gamze, Kirsehir Ahi Evran University Faculty of Health Sciences, Bagbasi Mah. Sahir Kurutluoğlu Cad. No: 100 Merkez (Bagbasi) Campus Center, Kirsehir, Turkey. E-mail: hem.gamzesaatci@gmail.com

Abstract

COVID-19, which emerged on December 31, 2019 in Wuhan, Hubei province of China, quickly spread to six continents and hundreds of countries. This has gone down in history as the first pandemic caused by corona viruses. The first positive cases in Turkey were identified on March 11, 2020. With the emergence of Corona many countries and Turkey have started to conduct studies related to Covidien-19. In particular, there is a need for more scientific data about the care and treatment methods applied in Turkey due to the high level of healing. Considering the wide-ranging care and therapeutic role of nurses, nurses play an important role in this process. Nursing care should be given in line with certain models and theories. One of these models is the Activities of Daily Living (ADL) model. For the aforementioned patient, firstly her introductory features and 12 ADL were examined, respectively. This case was presented in line with the ADL model, and a care plan was prepared and implemented using NANDA nursing diagnoses in line with ADL in order to solve the problems of a patient diagnosed with COVID-19 pneumonia.

Keywords: COVID-19; SARS-CoV-2; novel corona virus; pneumonia.

Introduction

COVID-19, which emerged on December 31, 2019 in Wuhan, Hubei province of China, quickly spread all over the world. This has gone down in history as the first pandemic caused by corona viruses. The first positive cases identified by the epidemic began on March 11, 2020, Turkey will continue to increase the impact. With the emergence of Corona in many countries and in Turkey it has started to conduct studies related to Covidien-19. In particular, there is a need for more scientific data about the care and treatment methods applied in Turkey due to the high level of healing. Considering the wide-ranging care and therapeutic role of nurses, nurses play an important role in this process. The purposes of nursing care of the individual with COVID-19; to ensure adequate and balanced food intake, to reduce the symptoms of the disease, to evaluate the effects of pharmacological treatment, to increase exercise tolerance, to prevent complications, to educate patients and families. Nursing care and patient

education should be implemented in line with the nursing process in order to optimize the patient's health status. The nursing process is the most important tool that provides a scientific and planned approach to nursing care. Nursing care should be given in line with certain models and theories. One of these models is the Activities of Daily Living (ADL) model. This model was introduced by Nancy Roper in 1976 and later developed by Nancy Roper, Winifred Logan and Alison Tierney in 1980-1981-1983. This model, which considers individuals comprehensively in physical, psychological, socio-cultural, environmental and political-economic dimensions, explains the needs of individuals in 12 areas. Components of the model are; individuality, life process, dependency-independence, life activities and factors that affect these activities. Below, first the introductory characteristics of the patient and then the 12 ADLs are discussed in order. This case is presented in accordance with the ADL model. The patient was informed about the purpose

of the publication, gave informed consent, and written permission was obtained from the institution.

I.G. is a 59-year-old male patient, retired, high school graduate, married with three children. I.G. had gall bladder and liver surgery 10 years ago. There is no food or drug allergy, no chronic diseases, and no medication he uses regularly. The patient, who did not have a known chronic disease at the time, applied to the emergency department with joint pain, chills and tremors. The patient whose lung tomography was matching with the Covid was immediately taken to the pandemic intensive care unit. Nursing diagnoses were made for some of the ADL. In cases where more than one diagnosis were made, the most important diagnosis / s affecting that activity are addressed in this article.

Order:

- Hydroxychloroquine tb 2X200 mg
- Favilpiravir tb 2x1600 mg (loading), 2x600 mg (maintenance)
- Vitamin C amp 3x2.5 g
- Assist amp 3x2 amp (IV)
- Clexane 0.4 ml 2x1 (SC)
- Pantpas flk 2x1 (IV)
- Ipravent puff 4x2 (inhaler)

The patient with increased respiratory distress was given a prone position every 2 hours to increase lung capacity.

Medical Diagnosis: COVID-19 Pneumonia

Evaluation According to Activities of Daily Living

1. Maintaining a safe environment: The risk of falling of the patient was found to be low, but the bed edges were raised as a protective measure, and the patient was not left alone until he was mobilized. The patient is not bedridden. However, he was trained not to get out of bed alone. Medicine cabinets, treatment trolleys and waste pails were positioned away from the patient's bed. However, the patient was insufficient to maintain self-care due to intensive care conditions. The patient's knowledge about the disease and its complications was insufficient.

Nursing Diagnosis 1: Self-care deficit

Expected Result: Ability to meet self-care needs.

Nursing Interventions: The patient was encouraged to express his feelings about the lack of

self-care. The patient was given a suitable position for eating. Oral care was given before and after meals. It was ensured that he was independent in dressing by practicing unaided dressing. Easy to wear clothes were provided. Enough time was allocated for dressing and undressing.

Evaluation: It was observed that she participated in self-care more effectively

2. Communicating: There was no problem in the patient's vision, hearing and speech senses. The patient said that the healthcare professionals was working with a smile and chatting with him every day made him happy. However, he also stated that he was very overwhelmed in intensive care with the effect of the visitor ban.

Nursing Diagnosis 2: Lack of information (disease and preventive measures)

Expected Result: Early recognition of complications.

Nursing Interventions: Information was given about the risk factors that worsen the disease. In addition, training was provided on isolation measures, the importance of wearing masks, gloves and gowns for the patient and those who came into contact with the patient were warned about reducing frequency of entrance and leaving the patient room.

Evaluation: The lack of information has been partially resolved.

Nursing Diagnosis 3: Social isolation

Expected Result: Stronger communication with the environment.

Nursing Interventions: The patient was asked to express his feelings and thoughts. The patient was constantly supported in verbal communication. Since it was not possible for the patient to be with his family during this period, he was given a phone call every day.

Evaluation: Social isolation was minimized.

3. Breathing: The patient, who had severe respiratory distress when he was hospitalized, stated that he was relieved seriously after the 10th day. The patient, with a respiratory rate of 20 / min, said that he still had mild respiratory distress, but did not feel pain during inhalation.

Nursing Diagnosis 4: Spontaneous breathing impairment

Expected Result: Normalization of ventilation.

Nursing Interventions: The vital signs of the patient were frequently followed and recorded. The patient's breathing and cyanosis were observed. During all these procedures, the restlessness, anxiety and fear of the patient were tried to be kept at the minimum level. Oxygen therapy was initiated and the patient was wearing a Continuous Positive Airway Pressure (CPAP) mask when necessary.

Evaluation: Respiratory distress was greatly resolved.

4. Eating and drinking: The patient, who was fed regularly in the hospital, was aware of the need to pay attention to his nutrition when he was discharged. The dietician determined the daily calorie intake as 2000-2500 kcal and the patient received the appropriate daily calorie in the hospital. The patient, who had a diet based on protein and vegetables, also took vitamins B and C as supplements. The patient stated that he generally liked the hospital meals, but missed the meals his wife made.

5. Eliminating: The patient's urine amount was between 2500-3000 ml per day and no fluid-electrolyte imbalance was observed. The patient, who said he had neither gained nor lost weight last 6 months, did not change in weight during his hospital stay. The patient, who stated that he had the habit of defecation every day before hospitalization, had a defect every 2 days during his stay in the hospital. The patient, who said that he was uncomfortable with going to the toilet outside his home, said that he did not feel any pain during defecation.

Nursing Diagnosis 5: Deterioration in gastrointestinal motility function

Expected Result: Regular defecation every day.

Nursing Interventions: The patient's bowel sounds were listened to daily. The color and dryness of his stool and whether it was difficult to do it was questioned and followed. Patient-specific and tolerable diet programs were created in cooperation with the dietician. Adequate fluid intake was provided.

Evaluation: The impairment in gastrointestinal motility function was corrected.

6. Personal cleansing and dressing: Since it is not appropriate to use a common sink in the intensive care environment, a foley catheter was inserted into

the patient. The patient, who paid attention to his personal hygiene, was given body and oral care twice a day. However, this care was partially provided due to hospital conditions.

Nursing Diagnosis 6: Lack of bathing self-care

Expected Result: Maintaining self-care.

Nursing Interventions: By evaluating the cleaning habits of the patient, the inability of body and mouth care and nail cutting were defined. The patient was encouraged to dress himself and his privacy was ensured.

Evaluation: The need for self-care was partially met, he was able to put on and take off his clothes on his own.

7. Controlling body temperature: The patient whose body temperature was high (38.1 ° C) on the day of hospitalization returned to normal (36.8 ° C) the next day. Intensive care room temperature was 22 ° C. Since the patient was wearing thin pajamas, there was no abnormality in body temperature.

8. Mobilizing: He stated that his movements decreased after he was admitted to the hospital. In-bed passive exercises were performed for the patient who had no limitation of movement. Pressure sore was not observed in the patient with good muscle tone. The patient was able to go to the prone position on his own every 4 hours. He said that he had pain associated with lying down for a long time. However, he got 2 points according to the pain scale.

Nursing Diagnosis 7: Activity intolerance

Expected Result: Achieving activity tolerance.

Nursing Interventions: In line with this diagnosis, the patient's activity level, pulse and blood pressure response to exercise were evaluated, ROM exercises were performed in the bed, and they were helped to maintain ADLs.

Evaluation: Activity tolerance partially achieved.

9. Working and playing: The patient, who was active in his social life, stated that he was uncomfortable with staying in the hospital. The patient stated that although he was retired, he could not stay at home for a long time, had a regular life and liked traveling in his spare time. Stating that he could overcome his illness more easily at home, the patient said that he missed his family very much and their support would be effective in his recovery. In

addition, the patient, who played music occasionally, stated that the music relaxed him.

10. Expressing sexuality: The patient stated that his illness did not affect his sexual perception and self-image.

11. Sleeping: The patient said from the monitor sounds in the intensive care unit that his sleep was very interrupted at night. At the same time, he stated that he was disturbed by frequent interruptions in his sleep because he had respiratory distress, he did not have difficulty falling asleep, but could not wake up rested in the morning due to interruptions during sleep.

Nursing Diagnosis 8: Disrupted sleep pattern

Expected Result: Ensuring that the patient got enough sleep and rest.

Nursing Interventions: The sleep patterns and habits of the patient were determined. The patient was helped to express his fears and worries, and it was ensured that he did not sleep and engage in activities during the day. The treatment plan was carried out in such a way that sleep was not interrupted by other members of the healthcare team. In line with their habits, non-drug practices that facilitate sleep such as relaxation techniques and listening to music were applied.

Evaluation: The disturbance in the sleep pattern was partially resolved.

12. Dying: The patient said that he was not afraid of death, and death was as normal as birth.

Discussion

In this study, care was applied using NANDA nursing diagnoses in line with the ADL to solve the problems of the patient with COVID-19 pneumonia. Patients with COVID-19 pneumonia may experience decreased appetite, taste disturbance in the mouth, malaise, fatigue, headache, high fever, cough, and respiratory distress (Guan 2020; Wang 2020). Initially, a 7-day treatment was applied to the patients. High doses of vitamin C were given to strengthen the immune system, analgesic application for symptoms, prone position, breathing exercises, etc. such as symptomatic treatments, hydroxychloroquine and favipiravir treatment were used. The risk of complications caused by these drugs is very high in patients. However, no complications developed in the patient. As a result; With the nursing care, the health problems of the

patient were partially and completely resolved. However, due to the complication risk of COVID-19 pneumonia, the patient continued to stay in the hospital until the COVID-19 test result was negative. The patient was discharged within 17 days because the last COVID-19 test was negative and the patient's symptoms decreased.

References

- Atabek Asti T. ve Karadag A. (Ed.). (2013). Principles of Nursing: Nursing Science and Art (1 volume). Academy Publishing. Istanbul, 137-173.
- Birol L. (2009). Nursing Process. 9th Edition, Impact Publications. Izmir, 5-21.
- Dikmen A.U., Kına M.H., Ozkan S., Ilhan M.N. (2020). COVID-19 epidemiology: What we learned from the pandemic. *Journal of Biotechnology and Strategic Health Research*, 4:29-36.
- Erdemir F. (2012). Nursing Diagnosis Handbook. Istanbul: Nobel Laureates in Medicine, Istanbul.
- Kotrotsiou, S., Theofanidis, D., Malliarou, M., Konstanti, Z., Sarafis, P., Tsioumanis, G., & Paralikas T. (2021) Investigating Nurses Stress Response Strategies During the COVID-19 Pandemic. *MATER SOCIO-MEDICA*, 33-3:168-173.
- Guan WJ., Ni ZY., Hu Y., (2020). Clinical characteristics of 2019 novel coronavirus infection in China. MedRxiv.
- Masters K. (2009). Role development in professional nursing practice. 2nd Ed. USA: Jones and Bartlett Publishers.
- Mo Y., Deng L., Zhang L., Lang Q., Liao C., Wang N., Huang H. (2020). Work stress among Chinese nurses to support Wuhan in fighting against COVID-19 epidemic. *Journal of Nursing Management*, 28: 1002-1009.
- Potter PA., Perry AG. (Ed.). (2003). Basic Nursing: Essentials for Practice. St. Louis: Mosby.
- Roper N., Logan W., Tierney A. (1990). The Elements of Nursing a Model for Nursing Based on a Model of Living. Churchill Livingstone, New York.
- Theofanidis D., & Dikatpanidou S. (2006). Leadership in nursing, *ICUS Nurs Web J* 25:1-8.
- Wang D., Hu B., Hu C., et al. (2020). Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, *JAMA*, 323: 1061-1069.