



# Nursing Care of Patient with COVID-19: Case Report

## COVID-19 Hastasının Hemşirelik Bakımı: Olgu Sunumu

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### ABSTRACT

Coronavirus disease-19 (COVID-19) is a disease that emerged in Wuhan, China on January 7, 2020, and was declared as a pandemic by the World Health Organization. However, there is no specific treatment and management protocol for COVID-19, which has led to a high mortality and morbidity in our country and worldwide. This case report aimed to describe the nursing care of a patient who was admitted to the hospital with high fever, diarrhea, vomiting, and respiratory problems and diagnosed as COVID-19. The nursing diagnoses of the patient were made according to the 10th edition of NANDA and patient care was conducted in accordance with the Gordon Health Patterns Model.

**Keywords:** COVID-19, nursing care, functional health patterns

### ÖZ

Koronavirüs hastalığı-19 (COVID-19), ilk kez 29 Aralık 2019 tarihinde Çin'in Wuhan kentinde ortaya çıkmış, ilk tanısı 7 Ocak 2020 tarihinde koyulmuştur. Bu nedenle COVID-19 adını almıştır. 11 Mart 2020 tarihinde ise Dünya Sağlık Örgütü tarafından pandemi olarak ilan edilmiştir. Ancak dünyada olduğu gibi ülkemizde de yüksek morbidite ve mortaliteye yol açan COVID-19 hastalığına yönelik spesifik bir tedavi ve bakım protokolü bulunmamaktadır. Bu olgu sunumunda yüksek ateş, ishal, kusma ve solunum problemleri ile hastaneye başvuran ve COVID-19 tanısı konulan hastanın hemşirelik bakımına yönelik bilgi verilmesi amaçlanmıştır. Hastanın hemşirelik tanıları NANDA onuncu basamağına göre belirlenmiş ve bakımı Gordon Sağlık Örüntüleri Modeli'ne göre gerçekleştirilmiştir.

**Anahtar Sözcükler:** COVID-19, hemşirelik bakımı, fonksiyonel sağlık örüntüleri

### Introduction

Coronavirus disease-19 (COVID-19) is known to be caused by a betacoronavirus belonging to the same species of pathogens that caused the severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome-coronavirus (MERS) outbreaks. COVID-19 first appeared in Wuhan, China on January 7, 2020, and was declared as a pandemic by the World Health Organization on March 11, 2020 (1). The treatment focuses on respiratory support; however, it seems that there is limited information about the nursing care of COVID-19 patients (2).

### Case Report

D.K., aged 45 year, is a mother of 3 children, works in a factory, and lives with her family. She was diagnosed with type 1 diabetes mellitus five years ago and has no history of prior surgery. She is no known allergies to any medications or foods. She was admitted to the emergency room on 02.04.2020 with the complaints of diarrhea, vomiting, cough, fever (39.5 °C), shortness of breath, taste disturbance, myalgia, and fatigue. She stated that her complaints had started 2-3 days before the admission to the emergency room. Blood tests and radiological imaging were performed. CT scan revealed a ground glass image and she

*\*This work was supported by Wiley.*

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**Cite this article as:** Yeniğün SC, Yeşilyaprak T, Demir Korkmaz F. Nursing Care of Patient with COVID-19: Case Report. *Bezmiâlem Science*. 2021;9(Supplement 1):94-96.

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Bezmiâlem Science published by Galenos Publishing House.

**Received:** 07.06.2020

**Accepted:** 04.08.2020

was hospitalized with suspicion of COVID-19. The patient's COVID-19 test was found to be positive on 04.04.2020.

Due to the low oxygen saturation (85%) of the patient, oxygen therapy was started via a nasal cannula (2 L/min). Fever, diarrhea, and vomiting continued during the first two days of hospitalization.

During the clinical monitoring, the patient was treated with anti-thrombotic, antiviral, antimalarial, antibacterial agents, analgesics when needed, and an antidiarrheal therapy for diarrhea. Her own anti-diabetic medications were also continued. Nursing care of the patient was performed according to Gordon's Functional Health Patterns Model (FHP). This model provides comprehensive nursing care by addressing the needs of individuals in 11 functional areas (3). The nursing diagnoses of the patient were made according to the tenth edition of NANDA (4), including risk of infection, nutritional imbalance (less than necessary), risk of electrolyte imbalance, risk of bleeding, anxiety, risk of fluid volume imbalance, hyperthermia, diarrhea, activity intolerance, ineffective breathing pattern, and acute pain. The patient's nursing care was performed in line with the established diagnoses.

## Discussion

It is stated in the literature that the care of COVID-19 patients involves a multidisciplinary approach, including anesthesia and chest diseases specialist, frequent monitoring of hemodynamic and neurogenic parameters, and evaluation of the need for intensive care (5-8). Due to the respiratory distress and low oxygen saturation (85%) during the hospitalization, the patient was provided with intermittent nasal oxygen, and vital signs were monitored eight times daily. Consciousness status was assessed daily using the Glasgow Coma Scale (GCS). It was observed that D.K.'s GCS score was 15 during her stay in the hospital. It is necessary to prevent hypovolemia due to vomiting and diarrhea, monitor the albumin level in case of shock, and provide cardiac support (9,10). Due to vomiting and diarrhea during the first two days of hospitalization, she was provided with plenty of fluids. The medications requested by the physician were administered and the outcomes were monitored. In addition, personal protective equipment should be used to prevent infections and the restriction of visitors should be ensured. For the prevention of pressure wound, it is necessary to change the patient's position every two hours, provide skin care, and observe the skin in terms of pressure injury risk (6). Antiviral and antimicrobial treatments were applied based on the physicians' request. The patient was informed about airing the room during the day, washing her hands before and after checking vital signs, and ensuring hygiene with a hand antiseptic. The patient was kept in her room without any accompanying person, and her treatment and care was provided. Since the mobilization area for the pressure wound was limited, she was mobilized every two hours in the room. In addition, daily skin evaluation was done. Non-pharmacological methods to prevent deep vein thrombosis and bleeding should be

applied to the patients and the medical treatment recommended by the physician should be administered. Agitation, anxiety, and delirium findings should be checked and pain assessment should be performed (6). Anti-thrombotic medication was applied carefully to D.K. and follow-up was performed for five days in terms of conditions such as ecchymosis on the patient's skin. She was told that her teeth should be brushed gently to prevent gingival bleeding. Each morning, the patient was visited in her room to relieve her anxiety, she was told to press the nurse call bell in case of emergency, and was encouraged to express herself. During the day, the patient was contacted by phone in order for her not to feel lonely. Daily pain assessment was done. When she had pain, non-pharmacological treatments were provided firstly, and analgesics were applied in accordance with the physician's request when the patient stated that the pain was not relieved.

Although the patients' health problems are partially eliminated with the nursing care provided according to Gordon's FHP and the NANDA nursing diagnoses, the needs of patients are evaluated more comprehensively and systematically in nursing models using comprehensive and standardized data collection methods. Furthermore, apparent and patient-specific nursing care and its use in a clinical setting also allow the nurse to evaluate each patient in an integrative manner. The patient's test result was COVID-19 negative 14 days after her discharge from the hospital.

**Peer-review:** Externally peer reviewed.

## Authorship Contributions

Surgical and Medical Practices: S.C.Y., Concept: S.C.Y., Design: S.C.Y., Data Collection or Processing: S.C.Y., Analysis or Interpretation: S.C.Y., T.Y., Literature Search: T.Y., Writing: S.C.Y., T.Y.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** This work was supported by Wiley.

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