OLGU SUNUMU CASE REPORT

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Experiences and Importance of Home Isolation in Diseases Transmitted by Droplet

Damlacık Yolu ile Bulaşan Hastalıklarda Evde İzolasyon Deneyimleri ve Önemi

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ABSTRACT Healthcare workers, especially midwives and nurses who work in service units that require close contact with patients, such as delivery rooms and coronavirus disease-2019 clinics, are at high risk of being infected with the severe acute respiratory syndrome-coronavirus-2. The virus can be transmitted and cause infections easily through physical contact and droplets. As the disease spread rapidly and infected many people throughout the world, it caused an unprecedented number of patients to be hospitalized and increased the need for medical treatment and care. This situation has led to an increase in the workload of health professionals working at all levels in the hospitals, especially midwives and nurses, and in the risk of transmission among infected patients and healthcare workers. This case report aimed to share the self-isolation measures taken at home by a hospital manager during the period after suspected contact with an infected person and during the treatment process.

Keywords: Healthcare worker; coronavirus; severe acute respiratory syndrome-coronavirus-2; COVID-19; occupational safety

ÖZET Koronavirüs hastalığı-2019 klinikleri ve doğum salonları gibi hastalarla çok yakın temas gerektiren hizmet birimlerinde görev yapan sağlık çalışanlarının özellikle ebe ve hemşirelerin şiddetli akut solunum sendromu-koronavirüs-2 ile enfekte olma riskleri oldukça yüksektir. Virüs, fiziksel temas ve damlacık yolu ile çok kolay bir şekilde bulaşarak enfeksiyona neden olabilmektedir. Salgının hızlı yayılıp çok sayıda insanı enfekte etmesiyle hastanelere çok fazla hasta yatışına, tıbbi tedavi ve bakıma ihtiyacın artmasına neden olmuştur. Bu durum başta ebeler ve hemşireler olmak üzere hastanenin tüm kademelerinde görev yapan sağlık profesyonellerinin iş yükünün artmasına, enfekte olan hastalardan ve sağlık çalışanları arasında virüsün bulaş riskine yol açmıştır. Bu çalışmada, bir hastanede yönetici olarak çalışan sağlık personelinin, temas şüphesinde ve tedavi sürecinde evde almış olduğu izolasyon önlemlerinin olgu sunumu olarak paylaşılması amaçlanmıştır.

Anahtar Kelimeler: Sağlık çalışanı; koronavirüs; şiddetli akut solunum sendromu-koronavirüs-2; COVID-19; iş güvenliği

Novel coronavirus (2019-nCoV) was first detected on December 31, 2019, in the respiratory epithelial cells and caused severe acute respiratory syndrome (SARS) in an individual who was a wholesaler at the seafood market in Wuhan, China.[1,2] As World Health Organization (WHO) declared coronavirus disease-2019 (COVID-19) a pandemic, the first case in Türkiye was announced by the Ministry of Health on March 11, 2020.[3]

The SARS-CoV-2 virus enters the human body through the eyes, mouth, and nose, and it primarily infects respiratory epithelial cells.[4,5] Coronaviruses, which belong to the single-stranded ribonucleic acid family of viruses, can easily infect animals and humans, and cause respiratory, hepatic, gastrointestinal, and neurological diseases.[6]

The WHO reported that the healthcare professionals are infected with the COVID-19 at a rate of 3.8%. It has been announced by the Geneva-based International Nursing Council that the number of infected healthcare workers notified to WHO worldwide increased from 23,000 to above 90,000 in a

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short time. Although healthcare workers make up only 3% of the world's population, 14% of the COVID-19 cases reported to WHO were in this group.[7] More up-to-date information is needed to improve every stage of healthcare delivery associated with COVID-19. Thus, in this case report, the authors aimed to share the isolation precautions taken at home by a healthcare personnel working as a hospital manager in case of suspected contact and during the treatment process. The informed consent is obtained for the publication of the data from the patient.

CASE REPORT

The patient was discharged from the hospital 10 days ago after COVID-19 infection. She applied to our outpatient policlinic for post-infection control. During the follow-up, in-depth interviews were made with the patient and information about his experiences with the disease process was obtained. The descriptive features of the patient and the findings of the disease process are given in Table 1.

The patient was a 39-years-old female, a college graduate, married, and had a cesarean delivery. She lives with her husband and 6-year-old son. She worked as a hospital manager and started to isolate herself in a room at home and monitor the symptoms of the disease due to close contact with an increased number of COVID-19 patients. The symptoms of the disease started about 15 days after starting to take these isolation measures; she first reported having headaches and chest and back pain the next day. The polymerase chain reaction (PCR) test for SARS-CoV-2 performed on the second day of symptom onset was negative (-), and there was no finding on the chest X-ray. The PCR test was repeated four days later due to the addition of muscle and joint pain to the continuing symptoms, and the result was positive (+) with no finding in the chest X-ray. Thereupon, the patient was started on favipiravir (2*8 tablets on the first day and 2*3 tablets for five days thereafter), enoxaparin sodium 0.4 mL 1x1 subcutaneous (SC) because D-Dimer was high (>1,000 ng/mL), and effervescent vitamin C 1,000 mg treatment (Table 1).

TABLE 1: Descriptive characteristics and symptoms of the case.

Variables	
Age (year)	39
Profession	Midwife
Education status	High school
Marital status	Married
Family structure	Nuclear family
Treatment place	Home+Hospital
Chronic disease	-
Symptoms	
Cough	Mild
Sputum	-
Nasal discharge	-
Headache	+
Muscle pain	+
Chest pain	+
Back pain	+
Weakness	+
Respiratory distress	+
High fever	+
Inability to smell	+
Inability to taste	+
Other	

It has been found that the patient made an extraordinary effort not to infect her family by taking strict isolation measures at home with the responsibility of being a healthcare professional as well as an infectious patient.

The patient reported that she was indeed expecting to contract the disease any moment, prepared herself through the news about healthcare workers contracting the disease and dying, was most afraid of infecting her husband and son, and tried to keep herself calm. Her statements regarding this period were as follows:

"…Psychologically, I did not experience serious anxiety or worry. I had many friends who had been diagnosed. I knew it would be my turn one day. I was trying to reduce my fever; at the same time, I was trying to wipe everything with chlorinated water." Three themes were identified from the statements of the case: "Anxiety, role confusion, and health seeking behaviors" (Table 2).

The patient stayed at home throughout most of her disease period with symptoms of high fever, weakness, muscle aches, headache, loss of sense of smell and taste. On the 6th day of her diagnosis, she experienced severe respiratory distress and was admitted to the hospital, although her fever decreased

TABLE 2: Qualitative data on the disease process of the case.

Theme	Sub-theme
Anxiety	Illness anxiety
	Death anxiety
	Anxiety about infecting family members
Role confusion	Family role confusion
	Parenting impaired
	Caregiver role strain
Health seeking behaviors	Protective behaviors
	Self-care requirements
	Living space control

and her symptoms regressed. Repeated PCR test resulted positive (+), her oxygen saturation (SPO_2) was 81-83%, and she was hospitalized due to extensive lung involvement in tomography. During her hospitalization, the treatment with favipiravir 2x3 tablets was completed to ten days. She was treated with enoxaparin sodium 0.4 mL 1x1 SC and effervescent vitamin C 1,000 mg. In addition, 5 L/min oxygen therapy was given through nasal cannula as long as she was in the hospital.

In this period, the patient described that she felt like a patient but also like a healthcare provider (midwife), she had a role conflict, and therefore, she was angry with herself from time to time and was afraid of being intubated. She described her feelings as follows:

"*My fever had decreased for two days, and all my complaints had regressed. I knew that positive cases got better within 7-10 days. I thought I got over with it too. But my respiratory problems started. Normally, I am a calm person, but not being able to breathe was very worrying.*"

DISCUSSION

In this study, the isolation precautions taken at home by a healthcare personnel working as a hospital manager after suspected contact with COVID-19 patients and during the treatment process were shared in the form of a case report.

The case took serious isolation measures for fear of infecting his wife and son with the disease. Studies have shown that healthcare workers who are married and have children experience more fear and anxiety than singles during an epidemic of an infectious disease, which can be attributed to married individuals feeling responsible for the health of their families.[8,9] In epidemics or pandemics, the lack of complete understanding about the characteristics and transmission routes of the viral pathogens, increased number of patients, overloaded health systems, long working hours, and excessive stress caused by fatigue create anxiety and concern among healthcare workers about being infected and infecting others during close contact with patients.[10-13] In line with this, fear of contracting and transmitting the disease may make the healthcare professional more susceptible to anxiety and stress. Thus, while being advantageous in terms of social support, married healthcare workers' attitudes on how to protect themselves from COVID-19 in the hospital and at home should be improved. In addition, psychological support systems should be strengthened to limit the potential effects of fear and anxiety on mental health.

It was found that the patient, who was a midwife in the managerial position in the hospital, experienced a role conflict-being a healthcare professional and a patient, and therefore, was angry with herself from time to time. It has been reported that psychological conflicts can create role confusion in the health care personnel's prevention phase.[14] Our study indicated that it would be beneficial for the individual to step out of her everyday role as a healthcare provider and accept the role as the patient receiving healthcare and to be psychologically supported in that role during the course of her disease.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise,

working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Ayşegül Dönmez;* ***Design:*** *Ayşegül Dönmez, Çiler Yeyğel;* ***Control/Supervision:*** *Ayşegül Dönmez;* ***Data Collection and/or Processing:*** *Ayşegül Dönmez;* ***Analysis and/or Interpretation:*** *Ayşegül Dönmez, Çiler Yeyğel;* ***Literature Review:*** *Ayşegül Dönmez, Çiler Yeyğel;* ***Writing the Article:*** *Ayşegül Dönmez, Çiler Yeyğel;* ***Critical Review:*** *Ayşegül Dönmez, Çiler Yeyğel.*

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