# Surviving Covid-19 And Dying from Pressure Injury Complications: A Case Report

*Covid-19'dan Kurtulmak ve Basınç Yaralanması Komplikasyonlarından Ölmek: Olgu Sunumu*

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**ABSTRACT**

The COVID-19 pandemic has created a fear that individuals will catch the disease if they apply to a health institution to receive health care services. In this study, it was aimed to present a patient who had pressure injuries but did not apply to the hospital due to fear of COVID-19 until her general condition was unstable, and died despite care and treatment, and to examine the nursing care.

**Keywords:** Pressure ulcers, COVID-19, nursing

**ÖZET**

COVID-19 pandemisi, bireylerin sağlık bakım hizmeti almak için bir sağlık kuruluşuna başvurması durumunda hastalığa yakalanacakları korkusu oluşturmuştur. Bu çalışmada basınç yaralanmaları olan ancak genel durumu istikrarsız olana kadar COVID-19 korkusu nedeniyle hastaneye başvurmayan, bakım ve tedaviye rağmen yaşamını kaybetmiş bir olgunun sunulması ve hemşirelik bakımının irdelenmesi amaçlanmıştır.

**Anahtar Kelimeler:** Basınç yaralanması, COVID-19, hemşirelik

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## INTRODUCTION

Pressure injuries, previously known as pressure ulcers, are an important and common condition that results in physical, emotional, and financial costs (European Pressure Ulcer Advisory Panel, 2019; Nguyen et al., 2015; Padula and Delarmente, 2019). The care of the patient with a pressure injury increases the workload of healthcare professionals, and the use of special materials and equipment used in treatment and care causes an increase in financial burden.

In our country during the pandemic, patients who complain about a health problem prefer to wait at home or find temporary solutions rather than going to a hospital. We consider that the case presented in this manuscript is an example of this problem.

## CASE PRESENTATION

The patient presented in this article is 57 years old, female, married, and has two children. The patient was admitted to the physical therapy and rehabilitation clinic of the hospital with a diagnosis of lumbar disc hernia and a pre-diagnosis of Sjögren's syndrome five years ago. There were swelling and redness in the joints, but there was no increase in temperature. Furthermore, the patient had dry mouth for one year, low back pain for one and a half years, and morning stiffness lasting for more than half an hour. The patient was followed up in the hematology clinic two years ago due to asthenia and pancytopenia. She was followed up with a pre-diagnosis of lymphoma in the hematology department, and a lymph node biopsy was taken. Hyperplasia and paracortical vascular proliferation areas were determined in the biopsy examination. Then, the patient was started to be followed up by the rheumatology clinic with a pre-diagnosis of pancytopenia associated with connective tissue disease. The patient used methylprednisolone tb 16 mg 1*1 peroral (PO) for approximately four years.

The patient was admitted to the rheumatology ward on April 25, 2020. The patient had severe dry mouth, dry eye, lymphopenia (LYM value 500/mcL, low), leukopenia (WBC value 3200/$mm^3$, low), thrombocytopenia (PLT value 19 103 /$mm^3$, low) lasting for the last month, and described arthralgia in the joints. It is known that the patient has been immobile for a long time and is dependent on activities of daily living. The patient had pleural and pericardial effusion. A hemorrhage was detected on the posterior surface of the left leg. It was learned that the patient had fecal incontinence. The patient was diagnosed with Sjogren's syndrome. The patient had been administered with intravenous immunoglobulin (IVIG) therapy for six months, with 80 g in the last month.

After the patient was admitted to the clinic, a patient diagnosis form was filled out, and nursing care was planned and applied. Since the total score of the Norton Pressure Scale was determined to be 16, a pressure injury prevention protocol, routinely applied in the clinic, was applied. Pelvic floor muscle exercises were applied for fecal incontinence, and water-based creams were used to prevent irritation. The patient's need for defecation was questioned at certain times. Regular skin care was provided to the patient to minimize the moisture factor. Sheets, mattress covers, and clothes were kept clean and dry. In the following days, a stage I pressure injury was detected in the sacrum area and wound care was initiated. The patient was informed by her physician about coming to the outpatient clinic once a month. It was stated that the first polyclinic control

was December 24, 2020. The number of patients diagnosed with COVID19 in Turkey on that day was 460.916 (COVID-19 information page. Republic of Turkey, Ministry of Health, 2021).

During the following period, the number of cases in Turkey increased rapidly and reached 2.624.019 on 19.02.2021 (COVID-19 information page. Republic of Turkey, Ministry of Health, 2021).

When the patient was interviewed, it was learned that she had not applied to the hospital between November 24, 2020, and February 19, 2021 and had not communicated with a healthcare professional despite her injuries due to her fear of COVID-19. The patient was admitted to the clinic to receive IVIG therapy again on February 20, 2021. The patient whose general condition was unstable was hospitalized (Fig.1-Fig.2), and as treatment, entecavir 0.5 mg tablets 1x1 PO, folic acid tablet 1x1 PO, methylprednisolone ampoules 20 mg 1x1 intravenous route (IV), piperacillin + tazobactam vials 3x4.5 gr IV, pantoprazole vials 40 mg 1x1 IV, and Human Albumin 100 ml 1x1 IV infusion was applied.

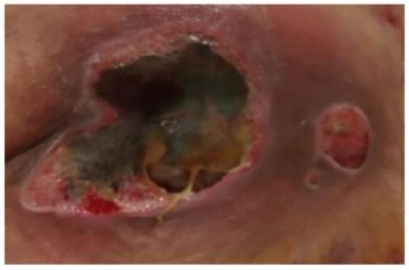

Figure 1. Pressure injury on patient admission to clinic

Figure 2. The patient's back region on admission to the clinic

When the patient was evaluated, it was determined that there were a stage III pressure injurie in the sacrum and coccyx region and wounds on the nose, lips, and tongue. The Norton Pressure Scale was rated as 11. For the patient who was determined to have a high level of anxiety, psychiatric consultation was requested in cooperation with the physician. In line with the psychiatric recommendation, escitalopram was added to 5 mg PO treatment.

The patient was started to be evaluated using the Pressure Ulcer Scale for Healing-push every day. During the first evaluation, the score was determined to be 14. On 12.03.2021, the size of the injury in the sacrum and coccyx region of the patient was 54 $cm^2$ and there were also small, staged II wounds. There was an odorless and moderate amount of discharge in the patient's pressure injuries. The wet dressing of the patient's pressure injuries was performed with physiological saline solution twice a day, and creams that support the granulation and epithelization process of the wound and its surroundings, zinc-containing barrier cream for intact skin, L proline, coenzyme Q10, hyaluronic acid, glucosamine, panthenol, aloe vera, white germ oil, allantoin-containing cream and foam dressing for bone protrusions were used.

When the patient's position was changed at 2-hour intervals, the patient had difficulty tolerating the other positions, and pain and respiratory distress developed. Fowler's position is preferred more frequently to relieve breathing. A dynamic system used with a power supply is used to reduce pressure. The patient's bone protrusions are supported. Massaging the erythematous areas is avoided.

The body mass index of the patient with hypoalbuminemia (Albumin value 2.5 g/dl) was 14.6 $kg/m^2$. To regulate nutrition, enteral nutrition support with a high protein value (Protein content 18%, 1.8 kcal/ml) was given through the nasogastric catheter (Silicone feeding catheter, number 14) as 40 cc/h +

water 20 cc/h. The patient's oral mucosa was evaluated daily, and solutions containing benzydamine and nystatin were used. Four L/min intermittent oxygen therapy was applied to the patient with a nasal cannula. The saturation values are above 90 (Information of the last vital signs: blood pressure 100/70 mm Hg, heart rate 130, and oxygen saturation 96).

The patient has been currently receiving inpatient treatment in the clinic for twenty-one days, and nursing care continues. Professional support and interdisciplinary care are provided to the patient from rheumatology, plastic surgery, and dermatology departments, a physiotherapist, a clinical nurse, and a wound care nurse. Despite the interventions, the patient's pressure injuries have not recovered yet (Fig.3).

Figure 3. Pressure injury when transferred to palliative care

Moreover, the pressure injury in the sacrum area progressed to stage IV. Plastic surgery and rheumatology physicians planned to use vacuum-assisted wound treatment. The patient died 45 days after being transferred to palliative care near where she lived. It can be accepted that the failure of the interventions applied to date is due to the clinical condition of the patient. However, the outcomes of the late initiation of treatment and care of the patient who avoided applying to healthcare personnel due to fear of COVID-19 are remarkable, and it is thought that this case report will contribute to the nursing literature.

**Ethical Approach:** The patient and her relatives were informed about the information and photographs used in the article as a case report and written informed consent was obtained from the patient. Also, the necessary permission was obtained from the institution.

**DISCUSSION**

Pressure injuries, which usually occur on bone protrusions, involve localized lesions in the skin and/or underlying tissue caused by mechanical forces (i.e. pressure, friction, cutting) or a medical device (Coyer and Tayyip, 2017; Team et al., 2020). Professional care and follow-up are essential in preventing the progression of pressure injuries. In the case presentation, it was determined that the patient did not come to the controls because he was afraid of SARS-CoV-2 transmission. Montalto et al. (2021) revealed that of patients undergoing elective surgery during the pandemic, 55% feared becoming infected with SARS-CoV-2 at the time of hospitalization. It is known that some patients postpone surgical interventions during this period. The threat of coronavirus in the hospitals scares these people more than any other health problem they experience. However, in this condition, the treatment and care of the patients are hampered dangerously. Interventions such as position change, personnel/patient training, the use of support surfaces, pressure injury risk assessment, skin assessment, nutritional assessment, and documentation were made in the prevention and care of the patient's pressure injuries, but positive progress was not achieved. Depression symptoms were observed in the patient due to the social isolation caused by the COVID-19 disease in society. The patient is immobile for approximately four months. Prolonged immobility causes the impairment of tissue perfusion and ischemia (Coyer and Tayyip, 2017; Singh et al., 2020; Team et al., 2020). Furthermore, Fowler’s position, which is preferred

more because of respiratory distress, caused the pressure to concentrate in the sacrum and coccyx regions (European Pressure Ulcer Advisory Panel, 2019; Kosuge et al., 2021). These factors may have caused the pressure injury stages to progress in a short time.

International studies demonstrate a relationship between nutrition and the prevalence of pressure injuries. In a study involving 2.425 patients with pressure injuries in the USA, it was concluded that 76.2% of the participants were malnourished (Lyder et al.,2001). Despite the absence of a physiological reason preventing nutrition, reluctance and loss of appetite were observed in our patient. The National Pressure Injury Advisory Panel (NPIAP) indicated the five subjective components of mechanical boundary conditions in the guideline "prevention and treatment of pressure ulcers/injuries" as activity and mobility limitations, moisture, older age, sensory perception limitations, general and mental health status (European Pressure Ulcer Advisory Panel, 2019). Moisture, which is one of these components, cannot be prevented adequately despite necessary interventions due to the patient's fecal incontinence. Pressure injuries cause poor patient outcomes such as impaired quality of life, pain, infection, and social isolation and may result in death in severe cases (Kosuge et al., 2021; Lyder et al., 2001). These multidimensional patient outcomes require an interdisciplinary approach (Serrano et al., 2020).

**Limitations**

The limitation of the study is that it is only one case.

**CONCLUSION**

We did not expect the patient's pressure injuries to progress rapidly in a short time. We consider that interventions such as telephone nursing counseling and virtual care should be increased to prevent the activation of chronic diseases and the deprivation of patients of medical and nursing care during the pandemic. Comprehensive studies should be conducted on how to prevent pressure injuries, especially in high-risk patients, at home, and in healthcare institutions during the outbreak.

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**Conflict of interest**

Authors has no conflict of interest to declare.

**Authorship**

D.S. and A.G.I. conceived the study, and wrote the paper.

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