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Family Health Nursing Practice in Specialized Hospitals During the Spread of COVID-19 in Japan

Reiko Inoue[1]* and Keiko Matsumoto[2]
[1]*School of Medicine, Department of Faculty of Nursing, Tokai University, Tokyo 151-8677, Japan*
[2]*Tokyo-kita Medical Center, Kita City, Tokyo 115-0053, Japan*

Abstract

Purpose: This study aims to clarify the nursing practice for families under the spread of COVID-19 infection through two cases.

Research method: The research designs are case studies. The data were collected in chronological order, looking back on the nursing records and nursing practices of the nurses in charge of the patients, including the patient's symptoms from admission to discharge, patient care, family situations and assessments, and nursing practices for the family. In the data analysis, multiple nurses and researchers examined the questions, thoughts, and intentions that led to the judgment along the progress table and summarized the patient's progress and nursing practice. As an ethical consideration, we obtained review board approval and verbally informed the patient's family for their informed consent.

Results: The subjects were patients hospitalized at the infectious disease hospitals in Tokyo in 2020, two cases of their families, and one nurse. The onset of COVID-19 is a crisis of loss and separation for families. The patient's family could not be present at the final farewell, experienced ambiguous loss, and isolated hospitalization led to physical separation from the family. The nurses carefully assessed the family's development and life history, listened closely to the family's anxieties, and intervened.

Discussion: As the infectious disease spread, the nurses supported building relationships so the family and medical staff could share satisfactory treatment. It was thought that nurses' intervention in the family would reduce the regret of the family of severely ill patients and lead to bereavement care.

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Introduction

Three and a half years have passed since COVID-19 (coronavirus disease 2019) was reported in the People's Republic of China at the end of 2019. As of May 2023, COVID-19 has caused more than 765 million infected people and more than 6.9 million deaths worldwide [1], causing great turmoil in society. From the beginning of the pandemic to the present day, COVID-19-related measures and perceptions differ from country to country, and there are also differences in medical systems and infection status. On January 30, 2020, the World Health Organization (WHO) declared the new coronavirus disease a "Public Health Emergency of International Concern (PHEIC)." Until its conclusion on May 5, 2023, humanity has learned much about dealing with emerging infectious diseases. Especially for those of us involved in medical care, it is important to look back on those three and a half years to face new infectious diseases in the future.

Most of the medical research on COVID-19 in the past has focused on treatment, such as the onset process, pathological mechanism, diagnosis, management, and efficacy of vaccines. In addition, many case reports cover a wide range, such as treatment progress and aftereffects, especially according to target characteristics. However, because the medical staff focused on saving the patient's life and preventing the spread of the disease, it was difficult for them to get involved in dealing with their families. So, it is not clear how the family of the infected patient spent their time and how they dealt with the family.

Therefore, in this article, we will look back on the transition of the COVID-19 epidemic in Japan and report on actual family care and nursing cases at the infectious disease core hospital in Tokyo during the pandemic.

Purpose of Research

We target to explain the family health nursing practice under the spread of COVID-19 through 2 cases.

COVID-19 infection in Japan and changes in response

Japan's first person infected with the new coronavirus was confirmed on January 15, 2020. In order to evacuate Japanese residents in Wuhan, China, the government sent Japanese families back to Japan from January to March of the same year. At the same time, the first infection spread period came from April to May 2020 as the acceptance of infected people, including passengers and crew members of the cruise ship Diamond Princess, which arrived at the port of Yokohama City, Kanagawa Prefecture. The incident is the so-called "first wave." The number of infected people per day peaked at 516 (as of April 16). Japan was afraid of infectious diseases at that time, and the city was quiet. After that, new variants appeared one after another and repeated epidemics. In spring 2021, vaccination for medical workers has started. However, the Delta variant broke out in the summer, killing over 100 people a day. In the fall of the same year, vaccination spread nationwide, but the highly contagious Omicron variant also flowed into Japan. The Omicron strain skillfully bypassed immunity and spread the infection, and in the seventh wave in the

***Corresponding Author:** Prof. Reiko Inoue, School of Medicine, Department of Faculty of Nursing, Tokai University, Tokyo 151-8677, Japan, Tel: +81-774-65-8855, Fax: +81-774-65-8820; E-mail: rinoue@is.icc.u-tokai.ac.jp

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summer of 2022, the number of new infections per day in August exceeded 260,000.

While the Omicron variant is highly contagious, it was said that the risk of severe illness was low. However, as the number of infected people increased, the number of high-risk elderly patients also increased. In January 2023, the number of deaths per day exceeded 500, and the number of infected people in Japan exceeded 30 million. After the eighth wave, the number of patients gradually decreased. In May 2023, the Japanese government declared that COVID-19 would be classified as a seasonal infectious disease on the same basis under the Infectious Diseases Act.

Research Method

Research design

These case studies describe the nursing situation that one nurse practiced with COVID-19 patients and their families.

Data collection method

In Japan, nursing practice is developed by multiple members in general. However, since COVID-19 is an unknown infectious disease, a specific nurse was assigned to be in charge and provide nursing intervention from beginning to end to prevent infection. Therefore, in this paper, one nurse's experience was extracted, analyzed, and described. The nurse in charge of the patient reviewed the nursing record and practice and summarized the patient's symptoms from admission to discharge, the care for the patient, the family situation and assessment, and the nursing practice for the family in chronological order. Regarding nursing practice, the nurses described the nursing care given to the family members, especially while assessing the family members according to the patient's symptoms. Regarding nursing practice, the nurses described the nursing care given to the family members, especially while assessing the family members according to the patient's symptoms.

Analysis method

Using the progress chart, we discussed it in the study group attended by nursing researchers and practitioners. Based on the patient's progress and a short progress chart of nursing practice, multiple participants discussed questions, thoughts, and intentions that led to judgments then and made efforts to increase reliability.

Ethical considerations

Before publication, approval was obtained from the review committee of the institution to which the nursing practitioner belongs. In addition, the patient's family members were informed verbally, and their consent was obtained.

Cases

<Case 1> (Table 1)
Patient: Male in his 60s, no medical history
Family: 60s Wife, no medical history
20s Daughter
Three family members

Patient progress: In February 2020, a cluster infection occurred on board a passenger ship. The man developed fever and dyspnea, and after being found to be COVID-19 positive, he was carried to a hospital designated for infectious diseases in Japan and admitted to the Intensive Care Unit (ICU). Although he was put on a ventilator to save his life, he died 14 days after admission.

Family progress: The patient's wife had a slight fever and cough. She was positive for COVID-19 and was isolated in her hospital. Her condition stabilized, and on the eighth day of her hospitalization, she became available to see her husband, the patient, in the ICU. She heard in the general ward that the patient had died on the 14th day.

Hospital stay	Patient symptoms	Patient care	Family situation and assessment	Family health care practice
First day	• Dyspnea • Oxygen 2ℓ/min administration • Able to walk to the toilet	• Safety and comfort care • Listening to concerns aboutinfectious diseases • Inform about the wife's condition	• Wife had no subjective symptoms but was hospitalized in a separate room. • Good marital relationship • Daughter's anxiety about her parents' infection is strong • Family Crisis	• Explanation of the patient's condition to his wife • Explanation of the parents' condition to their daughter • Coordinating communication between family members • Listening to the concerns of each family member
2nd ~ 7th day	• Increased feeling of yspnea • Orthopnea • Decrease in oxygen saturationdue to body movement	• Increased oxygen dose	• Wife's anxiety about the patient's condition increased. • Wife began to make escapist remarks. • Daughter feared losing her parents.	• Coordinating with the doctor to explain the patient's conditionto the wife • Confirming wife's understanding of the situation • Call the daughter to explain her parents' condition • Listening to the concerns of wife and daughter
8th day	• Respirator • Transfer to ICU, endotrachealintubation	Intensive care	• Wife expressed her joy at seeing the patient. • Wife understood the patient's condition. • Daughter's anxiety increased because she could not see her parents. • Wife's condition started to recuperate.	• Meeting with wife through the glass before putting on therespirator • Explanation to the daughter that the patient would be in ICU • Explanation to the daughter that the mother startedrecuperating
14th day	Death	Stored in a body bag and moveddirectly to the crematorium	• The wife could not accept the patient's death because she could not say the finalgoodbye to her husband. • Daughter's anxiety increased due to the loss of the patient. • Wives and daughters could experience complex grief	• Informing the family of the patient's death • Setting the opportunity for the wife and daughter to talkdirectly on the phone • Setting the opportunities for wife and daughter to share theirgrief and support each other
16th day			• Wife discharged and saw her husband's remains.	

Table 1: Chronological progress from admission to discharge, Case 1.

Their daughter had limited access to her parents, and she learned of the patient's death by phone with her doctor. The patient was placed in a body bag to limit infection and sent directly from the hospital to the crematorium. On the 16th day, the patient's wife was discharged, and she and their daughter were reunited with the patient's remains at the crematorium.

Practice: At the beginning of her hospitalization, the patient's wife listened to the doctor explain the infection. Although she said she understood it, the wife was confused because the patient's condition was deteriorating, and she could not accept the reality. The subject nurse in this study coordinated with her attending doctor and informed her about the patient's condition daily. The wife would listen to the patient's condition while receiving treatment. She was uneasy with the words of resignation that she had no choice but to expect her husband to be saved. In the COVID-19-dedicated ward, medical personnel in charge of direct care of patients were limited, and the nursing shift was changed to prevent infection among medical personnel within the ward. In this case, the subject nurse in charge of direct care practiced nursing while striving to prevent infection and also played a role in coordinating with medical staff and families. The wife expected an ambiguous loss because she could not see the patient and continued having difficulty controlling her emotions. Therefore, the subject nurse always tried to listen to her anxiety while telling her about the patient's condition. The nurse confirmed that the wife accepted the patient's condition and did not deviate from the current situation. Their daughter also expressed her fear of losing both her parents simultaneously to her caregiver on her phone. Hospital policy prohibited family visits, and the subject nurse and the doctor made daily calls to her daughter about the condition of the patient and his wife. On the 14th hospital day, the patient's death prompted the subject nurse to allow her wife and her daughter to speak to each other on the phone. The subject nurse set a time for the wife and daughter to express their feelings to each other so that they could share the reality of the loss of the patient.

<Case 2> (Table 2)
Patient: Female in her 30s, no medical history
Family: Junior high school student, the eldest son, no medical history,
Kindergarten student, the second son, no medical history
Three family members

Patient progress: In August 2020, the patient visited a nearby doctor due to a fever. Since it turned out to be positive for PCR, it was decided to be isolated in the hospital. Antivirals, antitussives, and antipyretics were administered, and the patient was discharged on day 12.

Family progress: The patient was the head of a single-mother household and had refused to leave her two children and be hospitalized. However, she was hospitalized due to government policy. The next day, her eldest son was also found to be PCR positive and was admitted to the pediatric ward. The second son was not eligible for hospitalization because he was PCR-negative. However, he was hospitalized in a private room in the pediatric ward because he could not decide where to stay temporarily. Younger son expresses anxiety after being forced into hospital away from his family.

Hospital stay	Patient symptoms	Patient care	Family situation and assessment	Family health care practice
First day	• Slight fever, mild cough	• Quarantine • Self-ADL	• The eldest and second sons were waiting at home. • It was difficult to live with only children. • There was no place to leave children.	• Advice to consult a public health centeror child guidance center
2nd day	• Slight fever, mild cough	• Quarantine • Self-ADL	• The eldest son tested PCR positive.The second son tested negative but was a close contact person. • Patient hated herself for infecting her eldest son. • Family disintegration anxiety	• The brothers were quarantined in separate rooms inthe pediatrics ward • Explanation to the patient how to deal with children
2nd day/15:00	• Desperately wanted to share a room with hersecond son and panicked.	• Explanation of the nursing system in the pediatricward	• The eldest son had no symptoms but accepted to be quarantined. • The eldest son seemed depressed. • The second son cried because he was hospitalized in a private room. • The patient complains of anxiety about dying and leaving her uninfectedsecond son.	• Explanation to the eldest son about the situation • Transfer the second son to a room that was easy tocontrol
2nd day/16:00	• Desperately wanted to share a room with hersecond son and panicked.	• Persuading the patient to return to her room • Listening to her feelings for her children • Listening to her reason for wanting to share the room	• Bond of three families • Fear that an unknown infectious disease would tear the family apart • Patient's anxiety about losing children • Mental well-being of mother and child was necessary.	• Allowing the brothers to share the room to ensure thesafety of other patients
2nd day/17:00	• Calming down when she was allowed to share aroom with her second son • Learning how to prevent infection from a nurse	• Guidance on protective measures to prevent infecting the second son	• The eldest son's anxiety was relieved when his younger brother sharedthe room. • The second son stopped crying by sharing the room with the patient.	• Maintenance of goods and air conditioning to preventthe patient from infecting the second son • Guidance on infection prevention measures for thesecond son
2nd/11th day	• Slight fever, mild cough • Proactive efforts to prevent infection	• Frequent calls for approval to maintain motivation for infection control	• The brothers had no symptoms.	• Communicate each time with the patient and theeldest son to share information • Close observation of the second son's physicalsymptoms, as well as making efforts for early detectionof infection • Infection prevention behavior for the second son
12th day	• Discharge		• The eldest son was discharged from the hospital in good condition. • The second son was discharged from the hospital without being infected.	

Table 2: Chronological progress from admission to discharge, Case 2

After that, at the strong request of the patient, the second son stayed in the same room as the patient. The medical staff was concerned about the infection of the second son, but the patient implemented thorough infection control under the guidance of the subject nurse. Due to measures taken by medical staff to prevent the spread of infection, the second son did not become infected, and the entire patient's family was discharged on the 12th day of hospitalization.

Practice: The patient tested COVID-19 positive and was required to be quarantined in the hospital. However, she was worried about being hospitalized alone, leaving her children. The subject nurse advised her to consult with a public health center or a child guidance center. The patient contacted the child consultation center, but the children were also close contact persons, so the center temporarily refused to care for the children at the administrative facility. The day after the patient was hospitalized, her eldest son was also found to be PCR positive. The children were placed in isolation in the pediatric ward of the hospital. The subject nurse then suggests that her second son be admitted to a private room in the pediatric ward. However, the patient wished to be hospitalized in the same room as the second son in the isolation ward. The doctor warned the patient that the second son could also be infected, but the patient refused. Furthermore, because the patient tried to escape from her room, she was criticized by the medical staff as a "selfish patient" and "lack of understanding." Therefore, the subject nurse listened to the patient's life history with her family and her thoughts on children. The subject nurse understood the strong affection and bond of the family and suggested to other medical staff that the patient be admitted to the same room as her second son. The subject nurse discussed strategies to protect the second son from infection with the team. The subject nurse instructed the patients to wear a mask 24 hours a day, even in the hospital room, not to eat meals together, and to disinfect everything the patient touched, such as after using the washstand and toilet. The patient faithfully continued infection control. The medical staff who saw the situation initially opposed sharing the room with the second son. However, they gradually began encouraging the patient, and the medical team worked together to support the patient and the second son's hospitalization.

Discussion

Medical practice and nursing system during a pandemic

As the spread of COVID-19 continues, nurses have played an important role in the medical field. At the beginning of 2020, the infection spread worldwide, and while the structure and characteristics of the virus were not fully elucidated, nurses were engaged in nursing at the risk of becoming infected themselves. In a survey of Japanese nurses, 15.4% of hospitals reported that nurses quit due to fear of contracting COVID-19 [2]. Specially trained nurses cared for patients with COVID-19 at the study facility. Also, the subject nurses of this study were responsible for preventing infection in the ward and coordinating with patients, families, and medical staff as nursing administrators. In Japan's first year of the COVID-19 outbreak, there was a nationwide shortage of protective equipment such as masks, gowns, and goggles. At medical facilities, nurses played an important role in managing supplies. Especially in specialized hospitals that received COVID-19 patients, nursing administrators had to make various responses and adjustments to prevent clusters within the hospital, such as comprehensive zoning, staff work style, clarification of role assignment, implementation of infection prevention training, and others. Due to the lack of personal protective equipment, sufficient infection prevention measures were not taken at that time. The subject nurses in this study were considered to have multiple roles, such as facility management, treatment of patients, and consideration for their families.

Also, at the beginning of 2020, increasing the number of nurses assigned to the infection ward was necessary beyond the normal number to accommodate the increasing number of infected patients without any effective treatment method being found. Nursing administrators readjusted staffing by closing general wards and moving nurses. Nurses caring for COVID-19 patients across the country also felt helpless as patients died one after another with limited staff. In the study, Koiwa et al. [3] showed a positive correlation between nurses' working hours, fatigue and anxiety, and fear. It was thought that the work environment of nurses and the fight against invisible infectious diseases impacted their mental health.

Nursing practice with the family members

In 2020, as the COVID-19 infection spread, many lost their loved ones without understanding the patient's condition or mental preparation.

Case 1 is a couple in their 60s. This age is the time for couples to find a new purpose in life after retirement, after raising children. Also, in this couple's case, it is believed that they had the financial leeway and time to enjoy a trip on a luxury liner and that they built a close marital relationship in their later years. However, while the couple enjoyed their trip, an unexpected infectious disease spread worldwide. A married couple became infected, and the wife lost her husband within 14 days of being hospitalized. During this time, the subject nurse listened to the wife's concerns and carefully explained her husband's condition to the doctor. This attitude could be considered as an act out of the need for the wife to accept the reality that the couple contracted an unknown infectious disease and to assess her understanding of the situation, even one step at a time. We believe that the subject nurse intervened while anticipating the wife's psychological state so that she could respond to her husband's sudden changes. It is thought that the subject nurse explained the situation to the patient's wife repeatedly and stayed close to her anxiety, which was also effective for the anticipatory grief of the family crisis.

The wife was informed of her husband's death on the 14th day of hospitalization. However, she was unable to accept her husband's death as a reality because she experienced an ambiguous loss without being able to be present at her death. To accept this ambiguous loss, the subject nurse arranged an environment where the wife could talk to her daughter. Usually, in the end-of-life setting, alleviating family regret is an important grief. The subject nurse assessed the distress of a family member who had to accept death without being able to see her husband and attempted a nursing intervention. The subject nurse thought it was important for the wife and daughter to share their loss, express their grief, and accept the death. Such interventions may lead to bereavement care for family acceptance of death. The target nurse seems to have set up opportunities for his wife and daughter to overcome this crisis and support each other as a mother and a daughter.

Case 2 is a single-mother family in the child-rearing period. The mother was the head of the household and raised two children. She contracted COVID-19 and was followed by her eldest son.

The mother seemed to hate herself for her responsibility. She also felt an increasing fear of death and anxiety about her future. As a result, she was determined not to die leaving her child behind, and she filed numerous complaints with her medical staff. In Japan, in the 2020s, infected people were forced to isolate themselves in private rooms. This rule also applies to children, and in Case 2, the eldest son was hospitalized in a separate room in the pediatric ward because he tested positive. However, since her second son's PCR test was negative, the mother's anxiety that she might leave her second son alone increased, and it was thought that she ran out of the ward. The mother also insisted that she brought her second son to her room and was at odds with her medical staff. Therefore, the subject nurse thought calming the mother's feelings and regaining her composure would calm the confrontation with the medical staff. In addition, the subject nurse thought that careful assessment of the mother's behavior would be a clue to understanding the family, so the nurse asked the mother about her family's life up to now.

Knowing the family history is generally important for family assessment. Besides, knowing how families overcame crises will lead to an understanding of family ties and strength. The subject nurse assessed that the mother made much effort to protect their children, so the nurse asked the staff to share the patient's COVID-19-negative second son in the same room instead of isolating him in a private room in the pediatric ward as a nurse administrator. This decision was met with opposition from other staff, but the mother's devoted actions later softened their hearts. Furthermore, it was thought that the families were united, and the relationship with the medical staff improved, leading to the patients' safe discharge.

Suggestions for family nursing under the spread of infection

The spread of COVID-19 has calmed down, and the medical field in Japan is regaining stability. Medical staff had many problems securing human, physical, and time resources and solving them then. However, while many staff members were paying attention to treatment and infection control, the nurses consciously intervened with the family in this case. We believe that such careful assessment of the family and response to their needs will reduce the anxiety and turmoil of the family of severely ill patients and will be a meaningful intervention that leads to bereavement care. COVID-19 had a major impact on the world and left many issues in the medical field. In Japan, this experience led to the deployment of mediators in ERs (Emergency Rooms) and ICUs (Intensive Care Units) for the families of critically ill patients during hospitalization. Their role is to create opportunities for family members to have good discussions about the situation of severely ill patients, share treatment options that are acceptable to families and medical staff, and support the building of creative relationships. The nurses will play an important role in this role in the future.

Conflict of Interest

The presenter and all co-presenters do not have any companies with conflicts of interest related to medical research that should be disclosed.

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