



Using an ICU Diary to Communicate With Family Members of COVID-19 Patients in ICU: A Case Report

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Abstract

Visitation restrictions for family members are problematic in intensive care management due to the COVID-19 pandemic. We analyzed the usefulness of an intensive care unit (ICU) diary about the experiences of family members of critical COVID-19 patients. Four family members of 2 COVID-19 patients participated in this report. Both patients were transferred to our ICU after 2 weeks of treatment at another ICU. An ICU diary was given to their family members post-transfer. The family members were interviewed before and after the patients' discharge; the recorded interviews were analyzed and categorized into several clusters using a text mining method. Five categories regarding their anxious feelings were classified before the use of the ICU diary, and 3 categories were based on their positive feelings after the use of the ICU diary. Intensive care unit diaries may be beneficial for disclosing patients' information when visitation restrictions are exercised due to the COVID-19 pandemic.

Keywords

COVID-19, ICU diary, family care

Introduction

The spread of the COVID-19 pandemic has devastated the economies and health care systems of countries worldwide (1). Family members' visitation to the intensive care unit (ICU) is restricted to prevent the spread of infection to patients or health care providers since the infectivity of COVID-19 (severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2]) is strong. It has been reported that informal communication between COVID-19 patients and their family members is absent and contributes to increased stress for family members (2). Thus, visitation restrictions of family members for critically ill COVID-19 patients admitted to the ICU have created various problems for both patients and their family members.

Research has reported that ICU diaries were useful as a medium to process emotions, gain insights, reduce stress, track information, and communicate with the staff and the patient (3). However, there have been no reports of using ICU diaries to provide information to family members of critically ill COVID-19 patients. In this report, we experienced favorable effects of the use of ICU diaries based on interviews and analysis using a text mining method.

Description

Patient and family members' details are anonymized in this case report. Participants were 4 family members of 2 critically ill COVID-19 patients admitted to our ICU from May to June 2020, after treatment at another ICU that does not use ICU diaries. The study protocol was explained to the family members, and those who furnished us with consent were included in this report. The ICU diary was provided with the verbal approval of the families of the COVID-19 patients. Following this, after obtaining written informed consent, a semistructured interview was conducted with

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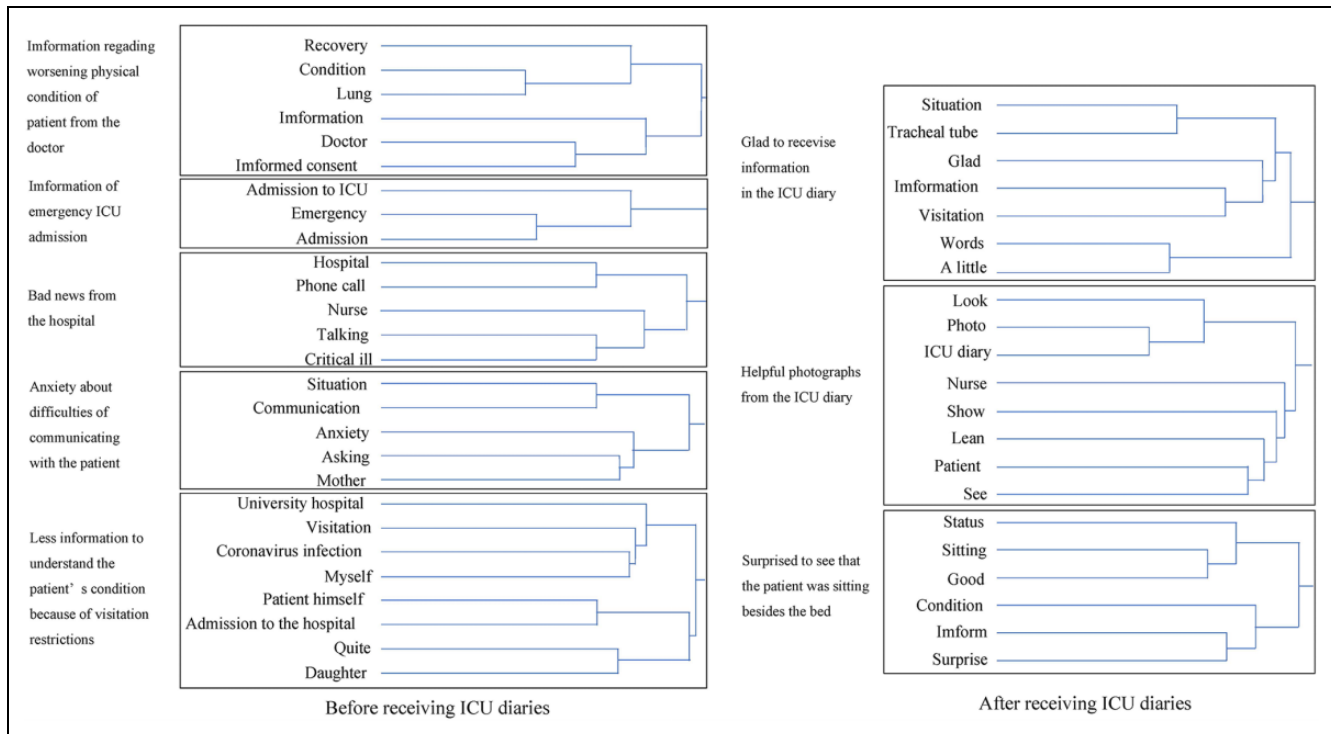


Figure 1. Hierarchical cluster analysis before and after receiving intensive care unit (ICU) diaries.

family members who received the diaries, one month after the patient was discharged from the hospital.

The ICU diary was prepared for each COVID-19 patient by the relevant nursing staff during the early stage of admission to the unit. Each ICU diary was mailed to the family of each COVID-19 patient every week. During the interview, we asked individuals about their experiences before and after obtaining the ICU diary. The data comprising the recorded voices were analyzed using a KH Coder 3 (<https://kncoder.net/en/>, accessed December 5, 2020) for qualitative text mining analysis (4). We conducted a hierarchical cluster analysis to categorize the patients' words.

Results

The 2 COVID-19 patients in this report were both males; the family members interviewed were all females. The words obtained from the interviews, before receiving the ICU diaries were classified into 5 categories (left of Figure 1). The following is a description of each category.

1. Information regarding worsening physical condition of patient from the doctor: Family members were upset when they received a phone call informing them of the patient's poor respiratory condition.
2. Information of emergency ICU admission: Family members had been told that the patient was suddenly admitted to the ICU.

3. Bad news from the hospital: It was revealed that when the hospital contacted them, it was for bad news.
4. Anxiety about difficulties communicating with the patient: Family members were anxious about not being able to see patients due to visitation restrictions.
5. Less information to understand the patient's condition because of visitation restrictions: It was revealed that a phone call from a doctor was not enough to understand the patient's condition.

Right of Figure 1 shows the 3 categories of family members' experiences after receiving the ICU diary. The following is a description of each category.

1. Glad to receive information in the ICU diary: It was found that the information contained in the ICU diary pleased the family members.
2. Helpful photographs from the ICU diary: The photographs in the ICU diary were found to be very helpful in understanding the patient's condition by family members.
3. Surprised to see that the patient was sitting besides the bed: In the ICU diary, the patient was sitting and was on his way to recovery and rehabilitation, which surprised the family members.

Lesson Learned

We interviewed the family members of critically ill COVID-19 patients admitted to the ICU, before and after receiving the ICU

diary, for an analysis of changes in their experiences with restricted visitation. The findings of the text mining analysis indicate that clusters related to negative experiences were abundant before receiving the ICU diary. After receiving the ICU diaries, these negative concerns changed to positive experiences.

It has been reported that for family members, a patient's admission to the ICU is a very stressful experience (5). Therefore, families' concerns should be adequately addressed. A recent study reported that the families of patients having COVID-19 need accurate information (6). After the emergence of the SARS-CoV-2 virus and the COVID-19 pandemic, a variety of online methods and video communications has been attempted, to enable interaction between patients in the ICU and their family members (7). Since patients who receive mechanical ventilation in the ICU are administered sedative drugs, it is difficult to communicate with family members. Our results suggest that the ICU diary, for critical COVID-19 patients who are not allowed visitation, may be a useful tool to attenuate the anxiety of family members during patients' ICU stays.

The most frequent word secondary to "ICU diary" obtained from family members after receiving the ICU diary was "photos." Thus, the ICU diary photographs may provide family members with positive experiences. Research on the efficacy of ICU diaries has demonstrated that photographs are essential for filling memory gaps of patients (8). In this report, the ICU diary photographs positively impacted the family members, and they felt more or less satisfied with them. The text mining analysis showed that the ICU diary not only allowed family members to view the patient objectively but also allowed them to see the patient repeatedly at any time and allowed them to share information with other relatives. On the other hand, family members may be adversely affected by viewing photographs of a critically ill patient (9). Health care professionals must consider each family member's situation and be aware that in certain instances it might not be appropriate for some family members to contribute to the diary.

Conclusions

We compared the experiences of family members of critically ill COVID-19 patients, before and after receiving the ICU diary, through text mining analysis. Before receiving the ICU diary, the family members spoke anxiously and pessimistically using emotional words; however, after receiving the ICU diary, such negative emotional experiences were attenuated, resulting in an increase in positive words and feelings. The ICU diary may be a useful tool for disclosing patients' information when visitation to the ICU is restricted due to the COVID-19 pandemic.

Authors' Note

All procedures in this study were conducted in accordance with the Sapporo Medical University (Approval No 2-1-3.) approval protocol. Written informed consent was obtained from family members of patients for their anonymized information to be published in this article. Ethical approval to report this case was obtained from Sapporo Medical University, Approval No 2-1-3.


Declaration of Conflicting Interests

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