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Journal Pre-proof

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Humanizing ICU COVID care

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To date, COVID-19 has caused more than 987,000 deaths worldwide. A substantial proportion of patients with COVID-19 require the highest level of care in the intensive care unit (ICU). In most hospitals, ICUs have been forced to significantly modify their usual work routine in order to treat the most severe patients. In many cases, ICUs have tripled or even quadrupled their capacity, which has placed an enormous burden on healthcare professionals and hospital managers. ICUs are highly technical spaces that have never been considered “patient-friendly”, especially for critically ill patients, although this has begun to change in recent years due to the growth of efforts to “humanize intensive care” in many ICUs in Europe. Importantly, the response from patients, relatives, and friends—as well as health care professionals— has been highly positive.

The measures and restrictions that ICUs were forced to implement during the current pandemic, together with the omnipresent fear and work overload for hospital staff, have severely undermined many of the recent advances in the field of emergency care. In the midst of this outbreak, it is important to reflect on what has happened in order to identify aspects of care that are amenable to improvement, which in turn will help to optimize patient care. Clearly, it is essential to consider both the physical health and emotional well-being of these patients.

A 60-year-old male patient presented with fever and respiratory symptoms at the emergency room of the University Hospital del Mar (Barcelona, Spain) on April 9, 2020. We performed a polymerase chain reaction (PCR) test to check for the presence of coronavirus. The test result was positive, and the patient was admitted to the inpatient ward and started on conventional oxygen therapy. Due to progressive worsening of oxygenation levels, the patient was transferred, 72-hours after hospital admission, to the ICU to start ventilatory support with high flow nasal cannula. On April 14, the patient required orotracheal intubation and invasive mechanical ventilation.

The patient’s clinical course was similar to that of most COVID-19 patients at our hospital. He developed severe acute respiratory distress syndrome (ARDS) requiring high oxygen levels, prone positioning, protective mechanical ventilation, cardiovascular monitoring, analgesation, and nutritional support. He also developed complications associated with

the infection and treatment for previous complications, among other issues. Then, the patient's condition progressively improved and we proceeded to withdraw sedation in order to awaken the patient.

At this point in time, the ICU environment at our hospital differed greatly from the more humanistic conditions that had prevailed in the ICU in recent years. Six months ago, the patient would have woken up next to his wife and/or children to the sound of their familiar voices. He would have participated in twice weekly music therapy sessions, and would have been able to begin walking around the unit with a walker or a patient lift, even if he was still attached to a monitoring unit or on mechanical ventilation. By contrast, during the pandemic, the patient faced very different conditions: a closed door, health care professionals covered in protective equipment (no visible faces), and no family members at any time. However, he would have heard the same sounds, had the same concerns and fears, which may have even been more pronounced.

The introduction of measures to humanize intensive care has revolutionized the field of critical care in recent years. In 2018, we initiated a program denominated "Humanizing the ICU at Parc de Salut Mar" (HUCIMAR), a program that includes care bundles to improve the physical and mental wellbeing of patients and their families, as well as that of healthcare staff. The HUCIMAR program allows us to offer high-quality, personalized treatment for survivors of serious illnesses who have had extended stays in our ICU. Some of the multidisciplinary therapies offered include a 24-hour open door policy for close family members, early mobilization in the ICU performed by physiotherapists, staff-assisted walks, environmental noise control to ensure quality nighttime rest, music therapy, widespread availability of televisions and clocks in all rooms, and architectural improvements to provide more people-friendly spaces. Regrettably, most of these measures had to be interrupted during the pandemic.

In the case of the patient described above, withdrawal of sedation and weaning from mechanical ventilation occurred in the early stages of de-escalation measures in Catalonia as the number of patients diagnosed with COVID-19 was falling and the weather was improving. Our patient began to make video calls and was even permitted a limited number

of visits from family members. After the patient tested negative for COVID-19, the treatment team, based on consensus agreement in the entire department, decided to restart one of the most remarkable therapeutic activities of the HUCIMAR program, which we call “healing seafront walks”.

The Hospital del Mar is located on the coast of Barcelona and the sea is directly across the street from the hospital entrance. Moreover, because the ICU is located on the ground floor of the hospital, it is just a short, quick walk to the seafront, despite the inconvenience of the high-performance ICU bed. After an extended period of time in the ICU, the opportunity to go outside is a key emotional/psychological turning point in any patient, especially in this case, in which the patient had been hospitalized for nearly two months (50 days). The opportunity to spend time outdoors in a natural environment such as the Barcelona seafront—one of the most popular tourist sites in the city—in the middle of the pandemic was particularly special.

After nearly two months of providing the patient’s family with frequent status updates by telephone, we informed them that we were going to restart the “seafront walk” program and the first outing was scheduled. When the day arrived, we first confirmed—in accordance with our protocol—that all the necessary materials were available (e.g., ventilator, tubing, transfer case with medication, airway mask bag, a mask, and oxygen cylinder), and the health care team (including a physician, a nurse, physiotherapist, and an orderly) was prepared. We met the family at the ICU exit door to start the two-minute trip to the seafront. Their feelings and emotions, the staff’s immense satisfaction, and the attentive, emotional gaze of nearby pedestrians were all captured in a photograph (courtesy of David Ramos, Getty Images) that went viral and was shown in all the main media and social networks. That photograph reveals—and forces us to confront—the new reality: we are all vulnerable to COVID-19. The picture captures the universal impact of this disease at this point in time, leaving us with an image that will be remembered by history. The image of an ICU patient crossing a city street in an ICU bed to view the sea is powerful. However, the reason the image went viral is because of its implications.

A new era is beginning, and we will be living with this virus and treating severe patients for months or years to come. These patients will enter the hospital with worries derived from media reports about the pandemic. Our mission and goal as intensivists is not only to provide patients with excellent medical care through the appropriate treatment and supportive measures, but also to consider their emotional wellbeing, as we strive to continue implementing measures to promote and ensure the humanization of intensive care.

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ABBREVIATION LIST

ICU: intensive care unit

ARDS: acute respiratory distress syndrom

HUCIMAR: Humanizing the ICU at Parc de Salut Mar

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