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Letter to the editor

Burns and pregnancy during the COVID-19 pandemic

To the Editor,

The management of burn patients, especially pregnant women with burns, is very challenging due to their high susceptibility to infection and possible complications [1–13]. Women of reproductive age are often seen in burn centers in low- and middle-income countries. Burn management in pregnant women requires special considerations. Hence, thermal injury can be fatal for both mother and fetus. Although burn management in burn patients has improved, especially in low-income countries, the mortality rate for pregnant women with burns and their fetuses remains high. Some clinical obstacles that make burns in pregnant women special compared to other burns include complications such as hypovolemia, cardiovascular instability, respiratory distress, sepsis, renal and liver failure, and inadequate maternal resuscitation, which may lead to long-term fetal hypoxia [14].

On the other hand, the emergence and spread of the COVID-19 pandemic as an infectious and highly contagious disease [15–20], has caused severe concerns in high-risk populations such as pregnant women with burns [14,21]. Therefore, great effort should be made to minimize contamination in burn wards. In addition, special supervision should be given to surgeries in patients, including pregnant women, during the COVID-19 pandemic due to the high rate of infection and high mortality in this high-risk population [21]. Hence, a study [22] showed that the risk of severe pneumonia in pregnant women with COVID-19 can reach 8%. In addition, COVID-19 in pregnant women can lead to an increased risk of obstetric complications such as preterm labor, premature rupture of membranes, preeclampsia, and cesarean section [21]. However, there is no universal standard protocol for the prevention, control, and treatment of COVID-19 in pregnant women. In a study [23], it is recommended that patients' movement to the operating room should be as fast as possible and there should be a pre-defined direct route to minimize the possibility of infection.

During the COVID-19 pandemic, pregnant women with burns can be at increased risk of morbidity and mortality. Hence, different countries formulated different measures including the exclusion of burn care and change in surgical

priorities to deal with this pandemic [3]. Obviously, SARS-COV-2 can lead to increased morbidity and mortality in burn patients, especially pregnant women with burns [21]. A study showed [21] that the room of pregnant women with burns should have negative pressure, intensive monitoring devices, and mechanical ventilation. Also, they showed that each room can be considered as a recovery room and delivery section for each woman. In addition, the required equipment such as a neonatal coat, portable neonatal incubator, cardiocotography machine, endotracheal tubes, bulb suction, baby stopcock, masks, nasal cannula, cord clamp, umbilical vein catheter, the required medications, instrumental delivery devices, ultrasound, and all other neonate resuscitation devices should be provided for vaginal delivery and cesarean section in the rooms.

Overall, health managers and policymakers should pay special attention to pregnant women with burns during the COVID-19 pandemic. Because in addition to the mother's condition, the fetus's condition is essential. Development of standard care protocols for treating pregnant women with burns and preparing necessary facilities including recovery room, essential equipment for vaginal delivery, incubator, and personal protective equipment in burn departments can be from the suggested and effective strategies to manage pregnant women with burns during the COVID-19 pandemic. However, there is no adequate evidence about the prevention, control, and treatment of pregnant women with burns during the COVID-19 pandemic. Therefore, it is suggested that researchers pay special attention to the effects of the COVID-19 pandemic on pregnant women with burns in future studies.

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Conflict of interest

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