Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Correspondence

Obstetric measures to decrease the spread of SARS-CoV-2 infection during labor in a conventional labor room

Dear Editor,

Coronavirus disease-2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) has become a global pandemic, including Taiwan. In our hospital (a tertiary referral center with an approximately 110 deliveries per month and a cesarean rate of 32% in the past 5 years [1]), pregnant women in labor are allowed to enter the labor ward without outdoor triage screening to avoid delay in the management of delivery. Thus, it should be prudent for caring women in labor with specific measures to decrease SARS-CoV-2 virus spread. During the pandemic, approximately 160 babies were delivered in this setting. Herein, we would like to report our measures.

First, every woman in labor enters in a designated single labor room with turning off the air circulation system, which is attempted to decrease the incidence of SARS-CoV-2 virus airborne transmission to other occupied rooms.

Second, in the designated labor room, every woman in labor is screened by telephone for travel, occupation, exposure, cluster status, fever, and upper respiratory symptoms and receives a digital

Fig. 1. The walls of (a) the dedicated emergency operating theater and (b) its affiliated facilities were covered with disposable transparent plastic film. (c) A simplified delivery tote bag with its contents was shown.

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vaginal examination thereafter. If the admission criterion is met, the reverse transcriptase polymerase chain reaction (RT-PCR) test is used to detect SARS-CoV-2 virus infection in the pregnant woman and her supporting partner [2]. Rapid RT-PCR test, such as the cobas® Liat® test [3], is used if available. Once the woman is diagnosed to be infected by SARS-CoV-2 virus, the woman will be transferred to the dedicated ward if not impending precipitous delivery. Besides, the RT-PCR test has a negative predictive value from 96.8% to 99.9%; thus, additional investigations or the RT-PCR retest after 24 h should be performed for highly probable cases [2].

Third, only one supportive partner is allowed to enter the labor room [4]. The supportive partner should wear a mask, receive a screening test right away, and quarantine in the labor room until the test's negative result [4]. The supportive partner can be a potential source of SARS-CoV-2 virus spread.

Forth, for the woman with impending precipitous delivery and confirmed infection or high suspicion but without the RT-PCR test result, she will be transported to the nearby dedicated emergency operating theater for delivery. The reason for such transportation is that forceful pushing during the second stage of labor is associated with an increase of the patient's respiratory secretions, which may result in airborne transmission. The operating theater usually has an independent air circulation system and/or a high-efficiency particulate absorbing filter, and may decrease airborne transmission. The above transportation can be avoided if the delivery room is isolated and away from other occupied rooms [5]. In addition, a dedicated corridor from the labor room to the dedicated emergency operating theater has been suggested [6].

Fifth, the walls of the dedicated emergency operating theater and its affiliated facilities are covered with disposable transparent plastic film (Fig. 1a and b). With the use of the film, the dedicated emergency operating theater is easier cleaned. During the pandemic, there were three emergency cesarean deliveries in this setting. Cesarean sections in women with negative RT-PCR test results were not performed in this dedicated emergency operating theater.

Last, a simplified delivery tote bag is prepared (Fig. 1c). The content of the tote bag includes scissors, needle holders, forceps, gauze, a suction ball, umbilical clamp, and medications, such as oxytocin, methylergometrine and lidocaine. With this tote bag, the flexibility can be improved for the preparation of precipitous delivery in the dedicated ward.

Declaration of competing interest

None.

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