Commentary

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COVID-19 does not stop obstetrics: what we need to change to go on safely birthing. The experience of a University Obstetrics and Gynecology Department in Milan

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Abstract: Since SARS-COV-2 appeared in Wuhan City, China and rapidly spread throughout Europe, a real revolution occurred in the daily routine and in the organization of the entire health system. While non-urgent clinical services have been reduced as far as possible, all kind of specialists turned into COVID-19 specialists. Obstetric assistance cannot be suspended and, at the same time, safety must be guaranteed. In addition, as COVID-19 positive pregnant patients require additional care, some of the clinical habits need to be changed to face emerging needs for a vulnerable but unstoppable kind of patients. We report the management set up in an Obstetrics and Gynecology Unit during the COVID-19 era in a University Hospital in Milan, Italy.

Keywords: antenatal care; fetus; pregnancy.

In February 2020 the SARS-COV-2 virus rapidly spread across Europe, with Italy and Spain as the countries initially most affected [1].

Since then a real revolution occurred in population social habits and above all in the daily routine and organization of the entire health system, with Lombardy as the Italian hot spot. While brand new Intensive Care Departments rose up in record time, all elective surgery has been postponed and non-urgent clinical services have been reduced as far as possible in order to commit most of hospital beds to COVID-19 patients. All kind of specialists converted themselves in COVID-19 specialists due to the increasing request of care for a rapidly growing number of patients.

From an obstetric point of view, midwives and obstetricians have faced an increasing number of COVID-19 positive pregnant women in need for additional care. In the meantime, measures have had to be taken to protect COVID-19 negative women, newborns and healthcare professionals. Obstetric care could not be suspended, ensuring safety at the same time. Therefore, some of the clinical behaviors had to be changed to address the diverse needs of a particularly vulnerable type of patients, such as pregnant women.

The effect of COVID-19 on pregnancy is still under investigation; the few data available concern the third trimester of pregnancy [2, 3] and would seem to indicate a risk of premature birth and the lack of fetal maternal transmission, at least in asymptomatic or mild symptomatic women. [4–8].

Theoretically, pregnant women should be more susceptible to the virus due to changes in the immune system which may increase morbidity. Therefore pregnant women might be at increased risk of developing a severe form of viral respiratory infection [9].

Recently, guidelines and recommendations for obstetric assistance in pregnant women infected with COVID-19 have been published [8, 10, 11]. Those are useful for guiding clinical practice, however much of the effort must be directed towards the reorganization of the care pathways of pregnant women still far from the time of delivery.

We report the management set up in an Obstetrics and Gynecology Unit with approximately 1,200 deliveries per year, during the COVID-19 era in a University Hospital scenario, in Milan, Italy.

The hospital is a multidisciplinary university hospital with, among others, an Infectious Disease, Pneumology, and Intensive Care Units, therefore from the early stages of the pandemic it was converted into a COVID-19 hospital.

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Antepartum care

In accordance with the Lombardy Region directives, all obstetric services have been considered not postponable and carried out following the indications of the Task Force [8].

The Obstetrics and Gynecology Day Surgery (DS) area was converted to a COVID-19 ward on March 8th: this area, originally intended for HIV positive women (in 1987), has the appropriate structural and plant characteristics and has been therefore temporarily destined for the emergency. Fortunately, the DS operating room was located outside the hospitalization area and this meant that surgical procedures, particularly, the legal termination of pregnancy service, has not been limited. The daily hospital stay was then transferred to the Obstetrics and Gynecology department, in rooms, as dedicated as possible and far from post-natal rooms. In this way, this activity was able to satisfy all requests, despite the closure of some city centers, also thanks to the availability of staff and anesthesiologists. As usual, requests for legal termination of pregnancy were privileged.

For women who enter the clinics, triage is performed with a 13 item questionnaire translated into 12 languages [12]. Since 2000, the hospital has hosted a “Health and listening center for migrant women and their children”, in collaboration with Crinali, a non-profit social cooperative that deals with cultural mediation. Migrant women have a great demand and need for treatment that often goes beyond healthcare. They need social attention and this is even more important during pregnancy, as they often live in a state of isolation due to cultural and linguistic blockade. Brochures available in English, Arabic, Spanish, Chinese and Sinhalese explain how to behave to protect from the infection and show the indication of a dedicated e-mail address and an information telephone line for women. In this quarantine period, the availability of the different cultural linguistic mediators is satisfied by the remote connection through a Tablet computer available in the clinic. In this way we are able to meet the needs of women, reduce the number of people present in the clinic, avoid gatherings and guarantee the work of mediators who receive an hourly wage.

In this way we have been able to take care of migrant pregnant women using telephone and e-mail communications on different days, dedicated to specific ethnic groups. A dedicated e-mail address has been activated for Italian women. Through this channel we check the results of blood tests and ultrasound tests. If clinical conditions and test results allow it, we can therefore delay the next appointment. In addition, we screen patients for COVID-19 symptoms by email interview, the day before they arrive in the hospital. Finally, this is a way to stay in touch and support women who have difficulties or inconveniences with the current situation during pregnancy. Since activation, on March 16th we have received 234 emails from 104 women. Also in this way we managed to reduce the number of accesses and, ultimately, the risk of contagion. In low-risk women, visits were scheduled every 6–8 weeks instead of every 4–5 weeks as usual; while in medium or high risk pregnancies, appointments were scheduled according to the pathology and the outcome of the contacts received via e-mail. In addition, the planning of outpatient obstetric visits has been changed by dedicating 45 min (instead of 30) to high-risk pregnancies and 30 min (instead of 20) to low-risk pregnancies, to avoid contacts between women in waiting rooms in case of delays. In the waiting rooms the chairs have been spaced at least 1 m apart; all women are asked to wear surgical mask and gloves, both provided by the clinic if not in their possession. Carers cannot enter the outpatient area. Once the woman has entered the doctor’s office, after triage, she is asked to remove her gloves and wash her hands with an alcoholic solution in the presence of hospital staff. Birth attendance courses were transformed into online courses using the Zoom platform for web conferences. For each course we have organized six lessons of 90 min each with three different professional figures: the midwife who deals with labor, childbirth and puerperium, the obstetrician who talks about the role of the doctor and the pediatric nurse who talks about breastfeeding. A virtual visit to the delivery area is also planned with a video in the company of a midwife. For each class a maximum of 20 women are admitted, most of them accompanied by their partner, intrigued by this new form of digital course. To date, 39 women have attended the entire online course and around 10 have completed a course online that started live before the COVID-19 emergency. Participant feedback is favorable. Although the emotional involvement of physical presence is unmatched, these courses are proving to be an excellent temporary solution to offer support and accompany couples to childbirth.

Intrapartum care

Obstetric care in COVID-19 positive patients necessarily requires specialist care. For this reason, two hub centers for the delivery of COVID-19 positive women have been designated in the urban area of Milan. One of them is also a hub center of fetal maternal medicine, given the presence of a neonatal intensive care unit. The other, is dedicated to

women who are in the third trimester [13, 14], and is located in a separate hospital building of several pavilions.

In our Unit, if a pregnant woman comes to the emergency room with an acute respiratory infection and/or close contact with a positive case in the previous 14 days, or with oxygen saturation ≤95% and/or respiratory rate >20 acts per minute, she must be subjected to nasopharyngeal swab. Until the result of the swab arrives, adequate insulation must be maintained and we have therefore equipped a short observation room for this purpose. Another isolation room is located in the maternity ward for women with positive nasopharyngeal swab, symptomatic or not, who need to be hospitalized but cannot be transferred.

On March 4, we started testing pregnant women with COVID-19 related symptoms (fever, fatigue, and dry cough) who were hospitalized in the emergency room or in the delivery room: we performed six nasopharyngeal swabs, with a single positive result. On April 6, according to the indications of the WHO and the Lombardy Region COVID-19 Obstetric Task Force, we started testing every woman who needed hospitalization in our ward, most of them to give birth, with the nasopharyngeal swab. Until the result is known – normally 6–8 h – the woman is hospitalized in a single bedroom, if not directly in the delivery room. During labor and delivery, also women with negative swabs are equipped with surgical masks and sterile gloves and are assisted by midwife and obstetricians equipped with personal protective equipment, as for positive women. The assistance of the midwife is individual and the presence of the staff in the delivery room is limited as much as possible. The presence of a support person during childbirth is allowed as long as he/she is wearing a mask and surgical gloves. Women admitted for elective cesarean section or planned inductions of labor are tested 24–48 h before hospitalization and the result of their swab is therefore known at the time of admission.

Postpartum care

No visitors are allowed in the maternity ward. Newborn dads can see mom and baby through a window separating the ward corridor from an outside waiting room.

Early discharge of mother and child is encouraged and psychological support is guaranteed for all women.

In addition, the local services that are part of our healthcare company have activated a telephone or video call listening service for new mothers who wish to be supported in starting breastfeeding, or for any difficulty they find when returning home, or for those that show signs of mild or less mild depression and so on. The service is provided by healthcare assistants, pediatric nurses, midwives and pediatricians.

Gynecological services

The COVID-19 emergency also changed the assistance of women with gynecological problems. All deferred gynecological surgical activities were suspended while all cancer prevention activities were continued. All second level non-cancer and non-preventive services have been suspended.

University education

Ours is a University hospital and also the headquarter of Postgraduate School in Gynecology and Obstetrics of the University of Milano. Didactic activities were maintained through online lessons. The exams were conducted online. The residents all with adequate personal protective equipment continued to attend the departments. In addition, they had the opportunity to work in the COVID-19 departments on a voluntary basis. All the residents of the University of Milan were also involved, always on a voluntary basis, in the management of telephone monitoring and in the follow-up of COVID-19 patients in home isolation, after hospitalization.

Social media

For about 10 years, our clinic has been present on the social network Facebook where we share information on our activities, services and open meetings aimed at future mothers and dealing with pregnancy, childbirth and the post-natal period and gynecological prevention [15]. During this emergency period we improved this communication channel by sharing educational videos on the COVID-19 emergency and reporting behavioral rules for pregnant women. We have published photos of the delivery rooms to satisfy the curiosity of women who cannot visit them in person (normally part of the birth support course). Since April 2020 we have tripled the number of interactions with women (the average number of "like" per post increased from 10 to 45 and average number of "share" per post increased from 0–3 to 5–15). Our goal is to stay in constant contact with our patients, showing that our assistance does not stop.

Conclusion

Pregnancy is a unique experience in a woman's life. Experiencing it during a global pandemic is certainly a challenge for women and healthcare professionals. More care and protection is needed for women and babies. While protecting the population and pregnant women themselves from the risk of infection, it is essential to guarantee obstetric care and support for even the most vulnerable women.

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