COVID-19 PANDEMIC

COVID-19 AND PREGNANCY: LEBANON PREPAREDNESS WITHIN GLOBAL RESPONSE

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Towards the end of 2019, in December, a new strain of coronavirus was identified in Wuhan, China, and found to cause severe acute respiratory syndrome (ARDS). The virus, known as novel coronavirus, was later named SARS-CoV-2, being one of seven coronaviruses, mostly close to SARS and MERS coronaviruses.

The WHO announced a name for the new coronavirus disease: COVID-19, and declared it as Public Health Emergency of International Concern. At the time of writing this manuscript, there are 4 589 526 confirmed SARS-CoV-2 positive cases and close to 310 391 death in 216 countries and territories [1]. Globally, countries went into staged precautionary measures to prevent spread of the outbreak [2]. In February 21, 2020, Lebanon identified its first case and immediately Ministries, Government bodies, and several agencies began a COVID-19 public health and awareness campaign along with escalated measures towards a state of medical emergency (banning travel from epidemic countries, closing schools/shops/malls/others up to a state of curfew) [3].

National efforts focused on flattening the curve of outbreak spread to avoid health system collapse in view of the limited number of beds, including intensive care beds, and the specificity of Lebanon demographics in relation to Syrian and Palestinian refugee camps and crowding, as well as the clinical course of COVID-19.

In a report from China on more than seventy thousand cases with COVID-19 disease [4], 19% of the cases had a disease spectrum from severe to critical with pneumonia being a major cause of maternal morbidity and mortality. WHO reports showed a mortality rate of 3%-4% [5], but with higher rate of patients requiring admission to the intensive care unit (ICU) [6]. The overwhelming and vast global spread of COVID-19 has raised concerns about its impact on pregnancy and childbirth, including neonatal health. Lebanon has an estimated population of pregnant women of around 125.000 Lebanese and non-Lebanese [7] that demands special attention, information, and guidance form health care providers, namely the obstetricians and gynecologists (OBGYN). Although international guidance consensus indicates that pregnancy is not a particular high risk event to COVID-19 [8], the physiologic changes during pregnancy are known to predispose pregnant women to worst outcomes with viral pneumonia, including higher rates of hospitalization [9], with consequent higher maternal and neonatal morbidity and mortality [10-11]. To our knowledge, data looking at the effect of COVID-19 disease on pregnancy remains limited which makes both counseling and management of these patients cautious and conservative. In this respect, comparisons were made with two other global outbreaks of highly-pathogenic coronaviruses: severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). Although SARS-CoV-2 is not identical to SARS and MERS, it shares some genetic structures and clinical manifestations in relation to pregnancy course and outcome. Data from the limited literature on SARS and MERS in pregnancy revealed cases of severe disease requiring need for intensive care admission [12-17]. Maternal mortality cases associated with SARS and MERS infection were reported. Comparing pregnant to non-pregnant outcomes with SARS infection in one case-control study showed that pregnant women with SARS disease had worst outcomes [18].

Globally, the community of OBGYN has been made responsive by the proactive response of the International Federation of Obstetrics and Gynecology (FIGO) in compiling resources, launching training webinars, and issuing statements related to COVID-19 outbreak in pregnancy, gynecologic oncology, essential sexual reproductive health services, and elective surgeries [19]. In specific, FIGO issued one of the earliest statement on COVID-19 and pregnancy that was contributed to by its vice president, the chair of the safe motherhood committee, and other experts from FIGO federations, highlighting priorities in dealing with pregnancy and maternal health care during the outbreak and in building the skills of OBGYNs to respond to it. FIGO aimed to reach its 132 national member societies which might have varied response and preparedness to COVID-19 pandemic depending on their resources and logistical preparations, more so in low and

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middle income countries (LMIC). Moreover, FIGO like other global agencies is adamant on ensuring interruption or delay to essential services that are mainly related to family planning and contraceptive methods, abortion (when legally allowed), post-abortion care, and identification and management of survivors of violence. There is an ongoing collaboration between FIGO and WHO to implement self-care guidelines whenever possible around services like contraception, cervical cancer screening self-test, dysmenorrhea, menopausal therapy, and counseling survivors of violence.

Lebanon was not also any different for early responders to COVID-19 and pregnancy. Considering potential risk of SARS-COV-2 on pregnancy, and aiming to protect pregnant women from the pandemic, the Ministry of Public Health in Lebanon (MOPH) formed a National Technical Committee on Corona and Pregnancy, the only specialized committee in the region, with the main aim to prevent COVID-19 outbreak among pregnant women and to raise professional and public awareness on COVID-19 and pregnancy. This aim presents a challenging priority to Lebanon in the presence of close to 50 thousands or more pregnant non-Lebanese women [20] spread across urban and camps settlements, with different patterns of antenatal care and suboptimal compliance with visits and supplement intake [21]. The Committee, chaired by Dr Faysal El Kak, included chairpersons (or their representatives) of the six main academic universities with teaching medical centers, the president of the Lebanese Society of OBGYN (LSOG), Director of the National Program on Mental Health, President of the Lebanese Order of Midwives, UNFPA, and representatives from the MOPH. The Committee was mandated to prepare response of health care providers (HCPs) to COVID-19 and pregnancy.

Over 10-12 weeks, the Committee achieved several tasks that included: Developing awareness and advocacy material on various aspects of COVID-19 and pregnancy (Pregnancy risk, breast-feeding, vertical transmission, protection measures, birth spacing, etc.) which were posted on social platforms and distributed to around 250 hospitals and primary health care centers all over Lebanon. The Committee members also developed clinical protocols and algorithms related to outpatient and inpatient management of pregnancy care and childbirth which was based on diverse global guidelines and adapted to the Lebanese context, and made available in Arabic, English, and French to OBGYNS and HCPs, as well as posted on the MOPH website, and on the International Federation of Gynecology and Obstetrics (FIGO) website (the Arabic version). Following that, a series of 12 training webinars were delivered in collaboration with the CME office at the American University of Beirut Medical Center (AUB-MC) that provided CME credits and certificate of attendance. The webinars were expected to reach close to one thousand participants in Lebanon and the region, and were instructed also in Arabic, English, and French. The webinars aimed to build the knowledge and skills capacity of service providers.

Looking at cases of COVID-19 in pregnancy revealed a report of only one case that presented to a hospital in the North of Lebanon. On presentation she had a low grade fever and her accompanying husband had suspicious symptoms. She was transferred to another hospital in the same area, and was considered a person under investigation (PUI), and was tested for SARS-COV-2 before delivery by cesarean section under precautionary measures with the medical team donning personal protective equipment (PPE). The newborn was healthy with good Apgar scores, and was separated temporarily from the mother, transferred to regular nursery and tested for SARS-COV-2. One day postpartum, the coronavirus test of the mother came positive, and that of the newborn came out negative. On the second day postpartum, the mother and newborn were discharged home with full isolation precaution instructions.

The fact that there is one documented case of COVID-19 in pregnancy might be related to the early precautionary actions taken by the Government, the intense health promotion addressing pregnant women urging them for self-isolation and lockdown, as well as the OBGYN community response to modifying antenatal care using telehealth. However, there is a strong global argument on universal screening of all pregnant women as they are a category more susceptible to respiratory illness complications [22]. In another study looking at 43 COVID-19-positive pregnant women over a period of 2 weeks, 33% infected women were often asymptomatic, supporting a role for universal testing upon admission to labor and delivery [23]. In a letter to the editor of the *New England Journal of Medicine* on universal screening, it was reported that out of 33 SARS-CoV-2 positive pregnancies on admission, 29 of them (87.9%) had no symptoms [24]. Universal screening of pregnant women depends on the degree of the pandemic spread and on the available funds and resources in a given setting. In Lebanon, universal screening is not affordable, especially that the current reporting of cases indicates successful containment of the outbreak. Nevertheless, precautionary measures of testing, isolating, and tracking should continue to avoid the second wave of the pandemic, and this of course includes pregnant women.

COVID-19 pandemic represents a global crisis that goes beyond health and health systems. Health care providers have been challenged and threatened as front-liners and one-liners at times, and OBGYNs managing

pregnancy and childbirth have to learn a lot about protecting themselves and the pregnant women. The Lebanese OBGYN community and other health care professionals (HCPs) are expected to continue seeking available resources of the National Committee on Corona and Pregnancy regarding modifications of antenatal care, special considerations in intrapartum and postpartum care, breastfeeding, and provision of long acting reversible contraceptives, as well as PPE for the protection of the much needed health personnel.

Disclosure

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