Expert Opinion

Obstetric Care in COVID-19: Strategy in a Tertiary Care Setting

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Abstract

In the beginning, the infection was thought to be limited to expatriates arriving in the country from disease affected areas or belonging to the religious gatherings. Since early April 2020 community spread and transmission among families has replaced the initial trend of transmission, thus increasing the number of women acquiring infection, including young pregnant women.

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Introduction

COVID-19 is a highly contagious, rapidly spreading, viral respiratory infection caused by a novel corona virus.[1] The disease starting in December 2019 in Wuhan, China was declared asa global pandemic by WHO on the 11th of March 2020, affecting 215 countries.[2]

COVID-19 cases are on rapid rise in Pakistan since first reported on the 26th of February 2020. The Punjab being the most populated province of the country is worst affected with largest number of infected cases with daily addition of almost 500 cases.[3] Lahore, acosmopolitan city with population of 12,642,000 is harboring maximum number of cases.[3,4] Initially the infection was thought to be limited to expatriates arriving in the country from disease-affectedareas or belonging to the religious segments. So, men were the most affected gender.[5] Since early April 2020 community spread has replaced the initial trend of transmission, thus increasing the number of women acquiring infection, including young pregnant women.

Sir Ganga Ram Hospital in Lahore is a tertiary care government funded public hospital, located in adensely populated central area of the city. It provides cost free quality health care service to patients belonging to lower socio economic class. Obstetrics and gynecology, the busiest department of the hospital, caters to all type of high-risk obstetrics with 24000 deliveries per year. With an increasing number of women contracting COVID-19, the health authorities declared Sir Ganga Ram Hospital as one of the dedicated hospitals for COVID-19 positive pregnant women. Looking at the devastation caused by the deadly virus in China, UK, USA, and Europe with far better health care system Hospital staff was anxious and apprehensive to handle the COVID positive pregnancies.

Real Challenges about COVID-19 Pandemic

The real challenge was to accommodate the COVID affected pregnancies without compromising the essential obstetrical emergency services. To address the situation, following challenges were identified

1. Health care workers handling asymptomatic COVID positive patients due to limited testing kits/labs. (Hence government policy to perform PCR of symptomatic patients or contacts of COVID positive patients).
2. Lack of separate labor wards and operation theaters for suspected or confirmed COVID patients.
3. Limited supply of personal protective equipment (PPE)
4. Capacity building to manage the COVID-19 patients while maintaining essential services.
5. Training of health care workers to handle the COVID patients.

To formulate a common policy, a joint meeting of hospital administration with clinicians from obstetrics, medicine, pediatrics, and anesthesia department was convened. All stakeholders were apprised about the national and provincial policy and guidelines to be followed and implemented to address the situation. The OPD admission and elective surgeries were postponed to conserve the PPE, ventilators, and other resources for expected surge in COVID patients.

Measures to Cope with COVID-19

The measures taken at obstetric department of Sir Ganga Ram Hospital Lahore to provide essential emergency obstetrical services to both unaffected and affected women with minimum interaction amongst the two are summarized in Table 1.

Obstetrics is a unique specialty where close interaction with patients is unavoidable. In our hospital, residents conduct antenatal clinics and manage and

Table 1: *Measures taken to Cope with COVID-19*

Administrative measures	• Identification of dedicated managerial and clinical staff. • Duty rosters of administrative and clinical team for COVID wards were developed and displayed. • Team comprising of obstetrician, physician, pulmonologist,pediatrician, radiologist, and anesthetist constituted for collaborative consultation. • Circulation of SOPs amongst all these departments to keep everyone on the same page. • A social media WhatsApp group was created to keep clinical team updated regarding patients progress and clinical guidelines
Hospital preparedness	• Allocated cordoned off obstetrics ward and ICU for confirmed COVID and isolation rooms for suspected COVID patients. • Developed SOPs for the admission and management of COVID patients, disinfection, and waste management following the guidelines issued by the health authorities • Allocated donning and doffing areas. • Designated separate delivery and operation theaters for confirmed and suspected COVID patients. • Provision of Sonic aids, CTG & ultrasound machines, Pulse oximeter, oxygen cylinders, ECG machines ventilators etc.
Patient care	• Allocation of a separate triage room at the entrance of emergency block to screen patients with symptoms like cough, fever, and shortness of breath to reduce the chance of exposure to non-COVID patients. • Shifting of COVID suspect patients to designated isolation rooms • Admission of COVID positive patients to indoor COVID ward adjacent to COVID delivery area separate from routine emergency labor and OT suite. • Patient education for observing preventive measures to avoid contracting and transmitting the infection • Instructions to reduce the frequency of antenatal visits. Moreover, patients with GDM and PIH were asked to keep a home record of blood sugar and blood pressure
Health care professional's capacity building	• Arrangement and provision of PPE to doctors, nurses, and paramedics. • Organization of workshops to train the health care workers about personal safety measures and level of PPE to wear in different situations. Training regarding donning and doffing of PPE. • Sharing of donning and doffing videos in WhatsApp groups as refreshers. • Instruction to health care workers to avoid sitting in groups and sharing meals. • Instruction to health care workers to avoid sharingresidence. If unavoidable, take special precautions to avoid infection transmission. • Giving paid leave to all pregnant doctors or nurses. • Implementation of policy to quarantine the health care workers for 2 weeks after-1week duty in COVID ward.
Infection prevention	• Ensuring all patients wearing masks before entering the checkup areas. • Ensuring safe distancing between patients in waiting areas and clinics. • Regular disinfection of clinics and wards.

deliver laboring women along with senior registrars and consultants. The provision of PPE to clinical teamwas a huge challenge. The limited supply of surgical and N95 masks by the hospital administration was insufficient to meet the demand. To address this shortage the decision was made to provide the full PPE (coverall suits, KN95 masks, face shield, gloves, and shoe covers)only to the clinical team deputed at COVID designated areas. Rest of the staff was asked to wear surgical mask and gloves with use of sanitizer and frequent hand washing.

As the pandemic entered the phase of community spread, number of asymptomatic patients increased. Now the greatest challenge was to ensure the availability of PPE to all the health care workers who were on the forefront and exposed to the asymptomatic COVID patients. A policy decision was taken to observe full protection by all clinical staff assuming every patient as COVID positive, unless proven otherwise. To fulfill the increasing requirement, funds were raised to procure the PPEs, besides, approaching NGOs and philanthropists to supply the masks, goggles, and face shields. Local vendors were contacted to stitch the coverall suits and shoe covers. Due to lockdown and shortage of non-woven polyvinyl propylene fabric coverall suits were stitched, with personal efforts. Now with passage of time manufacturing of masks and coveralls has commenced at industrial scale in Pakistan and are available.

Conclusions

The war is not over yet, soaring of COVID cases is anticipated owing to relaxation in lockdown. After the peak, this pandemic is most likely to become endemic demanding long-term strategy and concerted effort for provision of optimal health care.

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