COMMENTARY

Fifty Days of COVID-19 Pandemic in Pakistan: Unrivalled Adaptations in Obstetric Clinical Practices

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ABSTRACT

Civil hospital of Gujranwala District of Punjab is a teaching hospital where a huge number of patients visit every day. Obstetrics and gynecology department of the hospital is a much busy department, around 92,186 patients visited the department last year and 11,788 births were conducted. Since the first case of Coronavirus disease-2019 (COVID-19) was reported, country has witnessed a lot of phenomena due to Coronavirus pandemic. Therefore, it was much needed that department develops Standard Operating Procedures (SOPs) to respond to Coronavirus outbreak and sustain essential obstetric services at this institute. There are three important components to focus on for developing a policy for the department with aim of preventing COVID-19 infection transmission among patients and health care providers. These are Guarding (Protection), Gears (Equipment) & Grounding (Planning). These important elements need to be addressed for preventing spread of infection. Aim should be to continue smooth delivery of quality health services to gravid females and to keep a check on complications during pandemic.

KEYWORDS: COVID-19, Health care providers, Guarding, Gears, Grounding, Personal protective equipment (PPE).

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INTRODUCTION

Severe Acute Respiratory Syndrome Coronavirus 2 (SAR-COV-2) is an infectious causative agent of Coronavirus disease-2019 (COVID-19). It was announced a 'Public Health Emergency of International concern' by World Health Organization (WHO) on 30th January, and a global pandemic on 11th March 2020. The disease raided almost every continent of the globe except Antarctica. So was Pakistan; invaded by the disease and the first case of COVID-19 was reported on 26th February in the country. Over a span of 20 days (till 18th March), all provinces and territories of the country had registered COVID-19 positive cases.[1] After 50 days country acquired 25,837 COVID-19 cases with 594 deaths (reported on 8 May 2020). On day 50th, 1764 new cases reported in the country within 24 hours.[2] Nationwide lockdown was imposed till 9th May as a preventive strategy against Coronavirus in addition to hand hygiene, use of face mask, social distancing, quarantine and home isolation.[3] In last ten days, an alarming tendency of 100 percent increase in mortality due to Coronavirus was observed in the country. Inspite of worsening situation of disease spreading within the community, the government declared partial alleviation of lockdown measures.[4]

On 24th March 2020, Pakistan Tele communication Authority announced launching of a 'CORONA ALERT SYSTEM' through cell phone tracking to warn people who are at risk of

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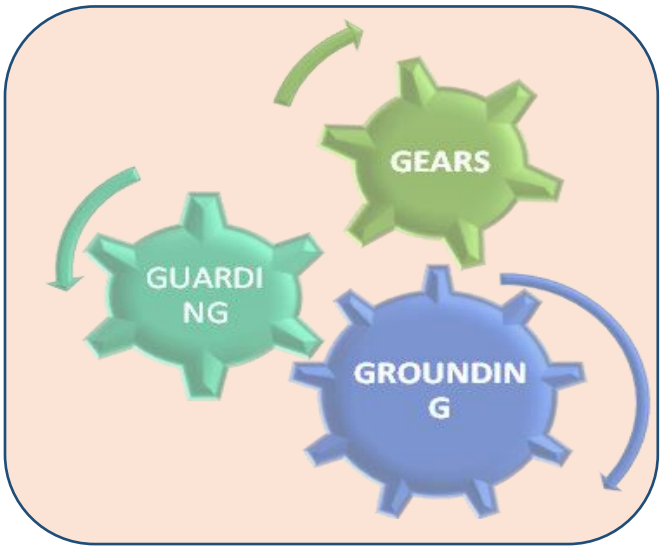
infection.[5] Another breakthrough was regarding Coronavirus therapy, Pakistan circulated the successful results of continuing clinical trials of passive immunization by plasma therapy in COVID-19 patients. Therapy is yet in experimental phase.[6]

Many dimensions of Coronavirus disease are still to unfold. Pregnancy is a state of decreased immunity, and gravid woman are vulnerable to respiratory infections and pneumonia. This was observed during 1918 influenza pandemic, where mortality rate in general population was 2.6% while 37 percent in gravid woman.[7] Data on impact of Coronavirus on gravid woman are limited. Births are happening in many health centers with mothers positive for COVID-19 in Pakistan. On 8th May 2020, a total of 27 positive cases of COVID-19 were reported in Gujrat by a single COVID-19 patient; is quite alarming.[8] COVID-19 rate among pregnant woman is alarming. Civil hospital of Gujranwala District of Punjab is a teaching hospital where a huge number of patients visit every day. Obstetrics and gynecology department of the hospital is a much busy department, around 92,186 patients visited the department last year and 11,788 births were conducted. Therefore, it was much needed that department develops Standard Operating Procedures (SOPs) to respond to Coronavirus outbreak and sustain essential obstetric services at this institute. Three important components to focus on for developing a policy for the department with aim of preventing COVID-19 infection transmission among patients and health care providers are 1. Guarding (Protection) 2. Gears (Equipment) and 3. Grounding (planning).

1. GUARDING

SOPs for safeguarding medical staff are developed and communicated for minimizing transmission of infection in the medical work force of the department and to protect them from contracting COVID-19 infection. In the apprehension of risk of cessation of health services due to spread of infection among health care providers, small segregated teams of doctors are established to ensure the physical presence of doctors and continuity of health services in the department. All precautionary measures are followed by the medical staff working in the department. Non splash able Gowns, gloves and face mask must to wear during working hours by all medicals staff who is working on front line. Social distancing is reassured when giving shift over of duty by doctors, in antenatal rooms and by patients in waiting area of outpatient department.



Furthermore, applications and leave requests are being communicated through cell phones for quick propagation. Morning meetings and daily audit report are also disseminated and discussed on a common social media group of residents and faculty members. Mortality reports are also shared on same social media group. All staff members stay vigilant to observe their flu like symptoms or fever and report promptly and isolate themselves if develop symptoms of COVID-19. The female medical staff in third trimester of pregnancy was sent on early maternity leave as pregnancy is immune compromised condition.

2. GEAR

Provision of Personal Protective Equipment (PPE) for health professionals remained an ongoing disagreement between health professionals and government bodies. Who to serve with Level III gears on and who with Level I; remained an unresolved dispute? Everyday switching policies created an atmosphere of fears and aggravation among professionals. Another policy which faced lot of resistance was to transform some of existing indoor resources for isolation purpose for COVID-19 cases, at same time, compromising the health

facilities for routine pregnant women visiting the department. The department is already providing health services to the patients beyond the capacity of available resources. All protective measures may seem insufficient after an evidence of detection of Coronavirus in the peritoneal fluid. Additional safety measures need to be practiced by surgical staff particularly in case of emergency surgeries till definite data is available.[9]

3. GROUNDING

Some groundwork and training is the top obligation to get to grip with such universal pandemic with more proficiency. If front line workers are well trained and mentally prepared before time, they can not only perform better to monitor the disease pattern, but can also be watchful for an upcoming outbreak. Since the execution of the SOPs in the department, we have admitted two confirmed positive cases of Coronavirus with pregnancy and have managed 4 suspected cases that later developed fatal complications and expired after shifting in ICU before testing for Coronavirus.

INSTITUTIONAL POLICY IN COVID-19 OUTBRAEK

Training for Donning & Doffing: A brief workshop was organized by the institutional leading team for training of health professionals on donning and doffing technique of PPE. This training was conducted well before the first case of confirmed COVID-19 registered in this hospital.

Constitution of COVID Patient Plan Committee: This committee was established in the hospital to make strategic planning regarding the management of COVID-19 confirmed and suspected cases referred to the hospital either for isolation or medical care. Committee comprised of senior faculty members of clinical and basic sciences, directed by the institutional leaders.

Field Hospitals: Three filed hospitals established in the district by the government, their administrative and management responsibility was given to civil hospital. A separate committee comprising of administrative members, medical and paramedical staff members was created to run these hospitals with efficiently.

DEPARTEMENT POLICY IN COVID-19 OUTBREAK

Detection of Suspected COVID-19 Gravid woman: Identification of suspected cases visiting outpatient department and ER was a real difficult task to reduce the risk of infection to medical staff and other patients. A system for triage of patients was developed, any woman with history of Contact, high grade fever, flu symptoms, sore throat, dry cough, breathing difficulty, or history of travel was to be isolated without any delay and managed with a multidisciplinary team. Temperature checking was done if woman gives positive clinical findings. All these measures appeared not reassuring as we are in phase of local community transmission after fifty days of pandemic in country. Furthermore many of pregnant patients were presenting with vague symptoms of seasonal flu so practicality of screening by symptoms was not good. Another challenge in control of infection spread is that infection can be transmitted during incubation period (2 to 14 days) and possible risk of transmission even after recovery and also through asymptomatic carrier.[10,11] In such circumstances, a policy was made in the department that all medical staff must practice level I protective measures all time on duty (gowns, goggles, gloves and N95 mask). Face shield mandatory to wear when performing a procedure or doing triage of patients. All gravid women with respiratory symptoms or history of contact were isolated and provided multidisciplinary team management to evaluate need for clinical testing for COVID-19.

Standard Operating Procedures (SOP) for Indoor Services: Taking into consideration need for protective measures to prevent the spread of COVID-19 infection among the department workforce which already is being tackling an overflow of obstetric cases round the clock, SOPs were required to be developed well timed for indoor health services. Instructions were displayed and communicated to restrict the visitors in the indoor. All patients & visitors had must to follow hand hygiene and wear face masks. Written instructions of steps of hand washing by World Health Organization was reassured. All low risk women after vaginal birth were allowed for early discharge after parturition. All cases of operative births without any risk factor were allowable for

discharge after 24 to 36 hours if clinically stable. Monitoring at home was permissible for pregnant woman with medical disorder of mild grade and counseled to utilize telemedicine services when needed. Plan of birth for pregnant woman with ruptured membranes at or beyond 36 weeks of gestation& in cases of IUFD was recommended to expedite, and miscarriages to be delayed for medical management where clinically suitable.

Practices for Delivery suite & Caesarean births: Bearing in mind, a limited operation theatre zone in the department, a collective policy was planned for vaginal or operative birth (clinically indicated) of a suspected or confirmed COVID-19 pregnant woman. It mentions surgery to be conducted in a dedicated area of Operating Room, with a team comprising of four members (anesthetist, senior obstetrician, nursing staff, and technician) inside theatre and to ensure donning in full PPE of all members. Health team for theater must be alert before time to take all precautionary measures before the surgical procedure. Disinfection of equipments and disposal of body tissues & fluids has to be performed according to 'infection prevention' protocol of the hospital for operating rooms. For next 4 hours, that room is not permissible to be used for procedures on other patients, till disinfection of all equipment and surfaces. For operative births, spinal anesthesia will be preferable after a collaborative decision with anesthetist because of risk of aerosolisation with general anesthesia.[12] Post cesarean patients are monitored in four bedded high dependency unit of the department, in isolation and must be wearing face mask. If patient need ICU care then staff who shifts the patient should be wearing full PPE. A shared policy was developed in collaboration with anesthetist, physician and obstetrician to minimize aerosol generating procedures like suction of body fluids, manual ventilation, endotracheal suction, nebulization, chest compression and insertion of nasogastric tube when clinically avoidable because of evidence of high risk of transmission through such procedures.[13]In situations when a medical personnel has to perform aerosol generating procedures or CPR, donning full PPE is mandatory irrespective of the Coronavirus diagnosis.

After birth, newborn should be isolated and skin to skin contact with mother should be prevented for two weeks as a protective measure to reduce the risk of transmission of infection. Mother can pump the breast milk and that can be given to the baby.[14]Though to date, no evidence of vertical transmission of Coronavirus is reported in woman with third trimester of pregnancy.[15]

Judicious use of Resources: In preparation for expected high number of Coronavirus cases in upcoming weeks, half of the indoor beds of the department were allocated for isolation of suspected cases. In this regard, all kind of elective gynecological surgeries were postponed and all emergency and urgent surgeries were allowed to carry on. A cautious use of face masks, gloves and sanitizers is obligatory to maintain a continuous provision during next few weeks when an alarming increase in number of positive cases is expected.

Is Lock Down Interrupting Hospital Access of Gravid Women?

On the other side of the picture of pandemic and nationwide lockdown, its being noticed that number of gravid women visiting this tertiary health center for seeking routine antenatal services or for plan of birth is almost reduced by forty to fifty percent when compared with the departmental statistics before outbreak of Coronavirus. This seems quite worrisome and alarming as far as maternal and fetal wellbeing is concerned particularly in high risk pregnancies. This could be the impact of fear and apprehensions among local community created by social media and news channels about Coronavirus and such cases being managed in this hospital. From where are these pregnant women getting health services? A notable concern for policy makers and administrative bodies of health department is that if these patients are being mismanaged by unskilled birth attendants; there will be an increase in maternal and neonatal morbidity and mortality.

Additionally, around 4 million births are expected alone in Pakistan after 9 months of pandemic.[16] Are health facilities prepared to respond to this high patient load effectively? Is there any planning for managing that overflow of obstetric cases in future?

CONCLUSION

With aim of continuing smooth working of obstetric care services during crisis of a global pandemic,

appropriate planning, changing policies for patient management and safe guarding health care team; all must be adapted with a collaborative and multidisciplinary team work, steered by a vigorous higher leadership, not only at institutional but also at governmental position .Obstetricians are all the time to be in their boots in pandemic calamity, working continually. Effective communication between doctors and focal persons is mandatory to deal with unseen challenges as epidemiology of disease is still in evolution. Professionals are on verge of option fewer situations in obstetric clinical practice, what can do is just to come together and keep a check on infection recovery.

CONFLICT OF INTEREST

None to declare.

FINANCIAL DISCLOSURE

None to disclose.

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Author's Contribution

FS: Acquisition of the published data and drafting of manuscript.

NS: Conception and design of study, critical analysis with intellectual output and final approval of the manuscript.

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