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COVID-19 in Obstetric Unit - Challenges and Lessons Learnt in Low Resource Settings

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Running Title: COVID-19 in Obstetric Unit of Non COVID Tertiary Hospital

Abstract: ***An obstetric patient turning COVID positive during her stay in a non-COVID hospital throws multiple challenges to administration. These can be the issues of space and need for creating separate infrastructure within the facility for COVID/ COVID suspect patients or issues of adequate supplies of personal protection equipment or issues of staff including their health, shortage, training, testing, quarantine and duty resumption. The administration needs to strategize and make policies best suited to their institution in order to maintain essential public services without compromising the safety of health care workers.***

Keywords: COVID-19, Personal Protective Equipment (PPE), Quarantine, Health Care Worker, Hospital Infection Control Committee

1. Introduction

An obstetric patient admitted as non COVID turning into COVID positive is a nightmare. Mrs Xreferred as a case of postpartum eclampsia with postpartum haemorrhage and acute kidney Injury stayed at various places (gynae casualty, emergency ward, dialysis unit, gynae ward) in non COVID area ofour hospital for three weeks undergoing multiple dialysis until she developed symptoms of Severe Acute Respiratory Infection (mistaken for pulmonaryoedema)and died after seventh cycle of dialysis. Her nasopharyngeal &throat swab taken due to COVID suspect status was reported positive (first case of department) after death. Multiple Health Care Workers (HCW) were exposed to her. It was a herculean job to trace her contacts, test them and put them on quarantine. Disaster did not end here; eight HCWs became positive whose contacts were also tested and quarantined. List was endless – total 100 HCWs were in the contact list. New admissions were stopped for 48 hours and infection control measures started. This index case opened a pandora of hurdles and challenges for administration and HCWs on issues of their health, staff shortage, training, testing and quarantine and duty resumption.

2. Health Care Workers Challenges

The repeated, prolonged and sometimes direct contact with patients put the HCWs at a risk of higher viral load exposure. Inability to maintain social distancing at all times in clinical practice and proximity to asymptomatic carriers predisposes the frontline HCWs (residents, nursing officers, nursing assistants and sanitation workers) to a higher risk of contracting COVID-19. Non availability/ lack of knowledge of PPE use, poor infrastructure adds up to the risk. Moreover, social stigma of HCWs leads to psychological symptoms like regret, resentment, helplessness, depression, anxiety, phobia and panic attacks. [1]

In a hospital already working with a skewed doctor patient ratio, this case sent almost 75% workforce of the department into quarantine. The new CDC guidelines on how to mitigate staff shortage came to our rescue as asymptomatic COVID negative contacts resumed work in quarantine period to sustain emergency obstetric services. [2] Each facility has to formulate its own staff recruitment policy with the help of guidelines. This may not be ideal but the risk stratification of HCW should keep in mind and overzealous quarantine policy avoided. Making a duty roster of HCWs with staggering hours is of utmost importance so that one team is spare to take charge in case of exposure of the working team. It was realized that in labour rooms different nursing orderlies and housekeeping workers were posted every day and they were being rotated in different areas. This practice resulted in many HCWs getting exposed to the patient. Thereafter, a change in policy to have the same nursing orderlies and housekeeping staff on rotational duty for 14 days at one place.

As per WHO and CDC guidelines, each HCW must be assigned a risk category after contact. Hospital Infection Control Committee (HICC) should assess on case to case basis using existing criteria to advice testing and quarantine. The quarantine policy has to be redefined from time to time based on the need for human resources and health of HCW. For resuming duty after testing COVID positive, asymptomatic HCW can resume based on time (10 days) or test (2 negative tests) strategy. For symptomatic worker, it is after at least 10days with 72 hours symptom free period (time based) or 2 negative specimens and symptom free (test based) strategy. [3]

Though mandatory training on screening, testing, infection control practices and PPE use is advocated, there is no mechanism to ensure 100% compliance. The lower cadres with inadequate knowledge and improper use of Personal Protective Equipment (PPE) pose a risk to other HCWs and patients.

In the absence of clear guidelines for our speciality initially and with an experience of many HCWs getting infected from this index case, we upgraded to higher PPE levels (N95 mask, face-shield, gown, double gloves, head and shoe covers) in non-COVID labour wards and emergency OT assuming every patient as potential COVID suspect. [4, 5] Scientific and proper use of PPE is vital in prevention of spread of infection.

3. Administrative Challenges & Scaling Down the Services

With the spread of COVID-19 from this case in a non-COVID facility, unique administrative issues were confronted in our Department. As per WHO & Ministry of Health and Family Welfare, Government of India (MOHFW, GOI) the challenges are broadly categorised into those related to staff (HCWs as dealt earlier), supplies and space [6,7]. To ensure supply chain maintenance of adequate PPE, HydroxyChloroquine prophylaxis, a quick stock checking was done and departmental requirement placed. A cadre-wise weekly supply was ensured through the sister in-charges of different areas. Ensuring necessary space within the existing infrastructure for COVID suspects and also ensuring physical distancing and isolation at the same time were the major challenges which were overcome by suspending elective surgeries, providing medical alternatives to surgery, narrowing criteria of obstetric inductions, domiciliary care of medical obstetric conditions etc. This included prolonged hormonal treatment (Progestin & Mirena) for abnormal uterine bleeding and atypical endometrial hyperplasia, MTP by medical methods followed by long acting reversible contraceptives, medical treatment of ectopic/scar pregnancy, postponing ovulation inductions &Intra Uterine Insemination, deferring treatment for 3-6 months in preinvasive and early stage gynaecologic cancers and substituting surgery by chemotherapy in advanced ovarian malignancy and hypofractionation regimen of radiotherapy for cancer cervix. [8,9]Only maternity services including obstetric emergencies and others like acute abdomen, torsion ovarian cyst were catered after triaging; although some did turn out be positive during hospital stay. These strategies helped us in increasing the available space for inpatient beds and creating separate operation theatre (OT)for COVID suspects in a different block utilising existing the family planning OT complex with modifications.

Our hospital being a non-COVID facility, strategies were devised to identify patients with risk factors for COVID-19 to minimise their contact with both hospital staff and other low risk patients. Measures which evolved over weeks included triaging of patients in admission area, Improved communication between institutions for patient referrals both to COVID designated hospitals and reverse referrals. Accountability was fixed for reporting and monitoring of services with regular audit. Immediate sanitisation of the ward following detection and transfer of COVID positive patient is now built in the routine. A dedicated ventilator for COVID suspect patients has also been ensured.

4. Lessons Learnt

1) Every patient should be considered as potential COVID positive unless proved otherwise. Universal precautions and appropriate PPE is key to its prevention.
2) Our working strategy should balance manpower between working team having constant members and equal numbers of backups in the event of workers falling sick or coming in contact with COVID-19 patient. The policy should hold true to nursing orderlies and cleaning staff.
3) Social distancing among colleagues at workplace is of utmost importance. Sharing lunch and tea with colleagues should be strictly avoided.
4) Hospital quarantine committee should be in place to stratify the risk of contact and individualise the quarantine period.
5) Hospital infection control committee has a pivotal role to play in sanitization of areas where COVID case is recognised. Daily cleaning of labour rooms and operation theatre should be done as per protocol laid down by HICC.
6) To avoid closure of services, an alternate place for labour room or casualty should be ready as a standby. As per guidelines if there is constantly increasing number of HCWs infected from an area where source of infection cannot be identified that should be closed temporarily. [10]

Every day there are new challenges, new guidelines with ever changing scenario of COVID-19 Pandemic and we have to keep services going while maintaining the safety of HCWs.

References

[1] WHO/2019-nCoV/MentalHealth/2020.1 Mental health and psychosocial considerations during the COVID-19 outbreak
[2] https://www.cdc.gov/coronavirus/2019-ncov/hcp/mitigating-staff-shortages.html
[3] https://www.cdc.gov/coronavirus/2019-ncov/hcp/return-to-work.html
[4] https://www.mohfw.gov.in/pdf/GuidelinesonrationaluseofPersonalProtectiveEquipment.pdf
[5] https://www.mohfw.gov.in/pdf/AdditionalguidelinesonrationaluseofPersonalProtectiveEquipmentsettingapproachforHealthfunctionariesworkinginnonCOVIDareas.pdf
[6] http://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/novel-coronavirus-2019-ncov-technical-guidance-OLD/coronavirus-disease-covid-19-outbreak-technical-guidance-europe-OLD/strengthening-the-health-system-response-to-covid-19/strengthening-the-health-system-response-to-covid-19-policy-brief
[7] https://www.mohfw.gov.in/pdf/EssentialservicesduringCOVID19updated0411201.pdf

[8] Burki TK. Cancer care in the time of COVID-19. Lancet Oncol 2020. https://doi.org/10.1016/S1470-2045(20)30201-1.
[9] Bhatla N, Singhal S. The COVID-19 Pandemic and Implications for Gynaecologic Cancer Care. Indian Journal of Gynecologic Oncology 2020;18:48 https://doi.org/10.1007/s40944-020-00395-7
[10] https://www.mohfw.gov.in/pdf/GuidelinestobefollowedondetectionofsuspectorconfirmedCOVID19case.pdf