Sunnybrook
HEALTH SCIENCES CENTRE

Guidelines for Management of Admitted Obstetrical Patients

modified for Sunnybrook Health Sciences Centre

Updated 30 April 2020

ANTENATAL EVALUATION

Patient presents to triage with COVID symptoms/URTI AND/OR an OBS concern:

Criteria for discharge home from triage: - should be mild presentation

- Stable vital signs (HR < 100, RR 15-20, temp < 37.8C, O2 sat > 95% on RA)
- No oxygen requirement
- No shortness of breath or increased work of breathing
- Suitable for phone call follow up q1-2days
- No lab abnormalities (see labs section)
- No acute obstetrical concerns

COVID Indications for admission: (based on illness assessment +/- co-morbidity)

- Temperature >37.8C
- Shortness of breath
- Cough with blood
- Chest pain
- S/S dehydration
- Decreased level of consciousness
- Oxygen saturation < 95%
- CXR or CT consistent with pneumonia (ground glass opacities)
- Lab abnormalities (see Lab section, abnormalities in wbc, APTT, fibrinogen, ALT, D-Dimer, LDH, CRP, ferritin)
- Patients with comorbidities: uncontrolled hypertension, poorly controlled GDM or pregestational DM, chronic cardiopulmonary disease, immunosuppressive states

Admission Investigations:

Baseline at admission, repeat as indicated

- COVID NP swab, if negative repeat 24-48 hours if symptoms persist.
- ECG
- Routine bloodwork: lytes, creatinine
- COVID specific prognostic bloodwork: CBC, PT, PTT, CRP, LDH, ferritin, fibrinogen, d-dimer – see next slide for labs
- Blood gas (suggest venous- if abnormal proceed to arterial blood gas)
- CXR for everyone, CT if SOB or SpO2 < 95%
- **Consultation with ID, OB Medicine and ACCESS (ICU) as appropriate**

Admission Labs:

- CBC – finding of lymphopenia is stated as most common (Guan: lymphopenia in 83%, thrombocytopenia in 36%, leukopenia in 33%)
- Fibrinogen – slightly lower in severe cases
- APTT – coagulopathy seen in severe cases in pregnancy
- AST/ALT > 40 – more commonly elevated in severe cases
- D-Dimer – levels >1000
- CRP >10mg/L – elevated
- LDH >250U/L - elevated
- Ferritin – markedly elevated
- Urine ACR to help r/o PET
- BNP +/- troponin in the setting of severe SOB +/- cardiac symptoms

ANTENATAL MANAGEMENT

Considerations:

- Start empiric thromboprophylaxis (enoxaparin) as hospitalized patient (decreased mortality in severe illness in GIM pop/n)
    - If taking ASA (low dose for prevention of PET) continue UNLESS CRITICALLY ILL - consider holding until recovery complete (suggested to exacerbate acute kidney injury in critically ill COVID patient)
    - Restrict use of indomethacin for TPTL; consider alternative tocolytic agent
    - Antenatal corticosteroids if <34 weeks and may require preterm birth
    - **Surveillance & Warning signs**
    - *Vitals with O2 saturation q4h- if requiring oxygen support increase vitals to q hourly with 1:1 RN care – move to BU*
    - If requires: New use of oxygen support ** **WARNING SIGN OF RESPIRATORY DETERIORATION**

  RR increases despite normal O2 saturation

  Increasing amount of oxygen to maintain saturation >95%

- **Warning signs of maternal deterioration**

  Increased O2 demands by 50% over 1-2h

  O2 sat < 95% despite O2 support

  >4.0L O2 by facemask

If preterm: convene emergency case/conference/zoom/ with colleague (MFM) staff

Once maternal respiratory deterioration, initiate celestone Rx in preparation for potential iatrogenic preterm birth

On mechanical ventilation, in consultation with ICU and the NICU team…

a. If < 28w GA and can maintain mechanical ventilation: expectant management
b. If <28 w GA and CAN NOT maintain mechanical ventilation: consider delivery***

c. If > 28w GA…. Consider delivery if signs of non-reassuring fetal status – remember that tachycardia and decreased variability will be present in the setting of maternal viral illness.
d. If >28 w GA and CAN NOT maintain mechanical ventilation: consider delivery

*** NOT to improve maternal disease process, not to alter fetal/neonatal outcome if delivering < 34w GA, give MgSO4 4g bolus before delivery- over 1 hour to limit maternal respiratory depression. Consider implications if concurrent acute kidney injury in the setting of COVID

Screening and management of fever:

- **All patients admitted to HRO are screened at entry and daily q shift**
- **ANY PATIENT** could develop COVID-19 symptoms/infection

IF an initially-COVID screen negative patient develops:

- Temperature >37.8C (most common symptom in pregnancy) or any other symptoms
- Give 500 cc fluid bolus (takes 30 min)
- Repeat temperature 30 min after bolus completed
- If still >37.8 (or any other symptoms), notify IP+C
- NP swab for COVID-19 – if negative and symptoms persist, repeat swab 24-48 hours
- Initiate Droplet /Contact Precautions, no extra personnel in room
- Order investigations as appropriate based on symptomatology/co-morbidity
- Increase maternal surveillance to **vital signs with O2 saturation q4h**
- VTE prophylaxis

If requiring oxygen support increase vitals to q hourly with 1:1 RN care move to BU and obtain appropriate consults

INTRAPARTUM MANAGEMENT

- If severe maternal disease – recommend hospital birth
- Continuous EFM as per local guidelines
- If mild symptoms: Maternal vital signs (HR, BP, RR, O2 sat) q 2h.
- If moderate symptoms: **Maternal vital signs (HR, BP, RR, O2 sat) q 1h. Oxygen to keep O2 sat >95%**
- **Hourly fluid status** to avoid fluid overload (affects ventilation, work of breathing)
- No hydrotherapy in labor/birth (risk of virus in feces, contamination)

- Encourage epidural anesthesia: minimize risk for GA
- No use of nitrous oxide for pain management (potential aersolization, risk of contamination)
- No indication for C/S unless to improve maternal resuscitation efforts
- Emergent C/S for OB indications not because of COVID diagnosis
- Elective C/S should not be delayed based on COVID diagnosis unless need for maternal stabilization.
- COVID diagnosis is not an indication for IOL; diagnosis of COVID is not a reason to delay an indication/urgent IOL unless need for maternal stabilization.
- **Consideration**: If SOB, maternal exhaustion or increasing hypoxia: may use assisted vaginal birth to shorten the second stage

** After delivery specimens to be sent**: Placenta swabs, tissue for micro and for histology**; Cord blood for virus PCR (need to clear tissue to pathology, they aren't dealing with samples / bodies etc. Of Covid pos patients I believe.) - Don't need only thig we NEED is NP swab Prior To Discharge [TO BE CONFIRMED FOR SHSC SETTING]