ALGORITHM FOR MANAGEMENT OF THE PREGNANT TRAUMA PATIENT

WOMEN OF CHILDBEARING AGE:
Prioritized management of airway, breathing, & fluid resuscitation (circulation)

↓

Urine $\beta$-hCG positive OR patient is known / observed (examined) to be pregnant.

↓ YES

Determine gestational age by history (EDD) and U/S for biparietal diameter (BPD)
Pt with known pregnancy ≥ 24 weeks or BPD ≥ 58 mm

↓ NO

Standard trauma management guidelines

Minimize fetal exposure to radiation. Send type & screen. For gestational age > 16 weeks & Rh -: Send Kleinhauer-Betke & notify OB for advice on admin. of Rhogam.

↓ NO

Utilize left lateral tilt position for mother to the extent possible to minimize caval compression.
Hemodynamically normal or "responder"?

↓ YES

Continuous fetal heart and uterine contraction monitoring per OB service (w/ OB consult)
Indications present for immediate delivery??

↓ NO

Further w/u & imaging studies TBD by trauma, EM, & OB teams

Other maternal injuries identified?

↓ NO

Admit mother to L&D w/ ongoing monitoring / observation, f/u

↓ YES

-Admit to trauma service
-OB service to determine plan for FHR monitoring in ICU or elsewhere

ADDITIONAL NOTES
• Exposure to less than 5 rad has not been associated with an increase in fetal anomalies or pregnancy loss and is herein deemed to be safe at any point during the entirety of gestation.
• Perimortem Cesarean section should be considered in any moribund pregnant woman of ≥ 24 weeks gestation. Delivery in perimortem cesarean sections must occur within 20 minutes of maternal death but should ideally start within 4 minutes of the maternal arrest. Fetal neurological outcome is related to delivery time after maternal death.
• Delivery of fetus at less than 24 weeks gestation is indicated to assist the resuscitation of a critically injured pregnant woman (i.e.: mother with HD instability proving difficult to manage i.e., pelvic fracture, splenic laceration with pt’s abd open; s/p splenectomy, packing pelvis with persistent hypotension), as delivery will lead to the extraction of a non-viable infant.

Priority during resuscitations is always given to the mother, and the determination of gestational age, initiation of FHR monitoring, etc. must be prioritized in the context of the severity of maternal injuries.

Obtain urine $\beta$-hCG on all women of childbearing age of unknown pregnancy status

OB should be notified immediately of all pregnant trauma patients whose gestational age is thought to be at least 20 weeks. An OB consult should be obtained for all other pregnant patients once patient stable re: appropriate OB f/u. Page OB using OB BATCH PAGER. Enter the OB trauma code: “911-8111”

During pregnancy, other imaging procedures not associated with ionizing radiation should be considered.

• Consider delivery of fetus if mother requires OR
• Establish continuous fetal monitoring if not proceeding to delivery. vs. delivery if mother requires OR
• Consider delivery of previable fetus (20-24 weeks) with persistent/recurrent shock and confounding abdominal injuries (e.g. fractures w/ packing, major abd. Vascular injuries, need for ‘damage control’, etc.)

During initial evaluation, FHR will be continuously monitored by OB nurse or MD (for all gestational age > 24 wks.). If discontinued for any reason, the OB attending must be notified immediately.

Indications for immediate delivery include:
• Fetal bradycardia <70 for >8 mins
• Maternal cardiac arrest >4 mins
• Suspected large abruption
• Other ominous FHT patterns (persistent late decels with absent or decreased variability, sinusoidal)

Possible use of BMZ, formal US with peak systolic velocity of MCA, r/o abruption, serial CBC w/ PLTLS, fibrinogen

Minimal observation of FHT/ uterine contraction: is 6 hrs after time of event. Prolonged monitoring (24 hrs) maybe warranted if there is concerned for placental abruption/PTL