TRAUMA IN PREGNANCY

(Last updated1/22/2020; Reviewer: Zhigang Chang, MD, Sarah Chalmers, M.D.)*

PRESENTING COMPLAINT: variable

FINDINGS

- **A** Secure airway and c-spine
- **B** **supplemental oxygen as needed**
- **C** **hypotension**
- **D** Variable altered (V,P,U,D)*
- **E** **Variable depending on the cause**
- **U_{PC}** **FAST exam: variable findings (blood in hepatic recess or pelvic, pneumothorax, hemothorax, hemopericardium, etc)**
- **L_{PC}** **variable depending on cause (anemia in blood loss; electrolyte disturbance in burns, etc)**

***V** (verbal), **P (**pain), **U** (unconsciousness), **D** (delirious)

U_{PC} (point of care ultrasound) **L_{PC}** (point of care labs)

1) INITIAL ASSESSMENT AND STABILIZATION

- **Management of the maternal trauma patient should follow the usual approach to trauma victims, keeping in mind that initial evaluation and resuscitation should be directed to the mother. The fetus has low/no chance of survival if the mother is not appropriately managed.**
- **Additional issues:**
  - Left lateral tilt or left uterine displacement after 20 weeks gestation during the initial evaluation and management to maximize cardio output
  - In later pregnancy, clinical signs of abdominal examination are unreliable because of displacement of intra-abdominal organs by the enlarging uterus.
  - Upper abdominal penetrating trauma is more likely to cause multiple gastrointestinal injuries, whereas lower abdominal injuries usually involve the uterus and contents
  - A rapid but thorough primary survey for identification and initial management of acute lift-threatening injuries is required and should follow an ABCDE approach.
  - The resuscitation/trauma team should include an obstetrician and neonatologist
- **Management of fetus:**

- The fetus is usually considered viable when it is more than 24 weeks gestation, and/or more than 500 g estimated fetal weight. In emergency setting, assessment may be difficult, an alternative consideration is that if the uterus is above the umbilicus, the fetus may be viable.
- Consideration may need to be given to emergency delivery of the fetus in the setting of un-survivable maternal injury or maternal cardiac arrest.

2) SECONDARY SURVEY AND MANAGEMENT

- Identify all injuries include: head to toe; front and back; surface-orifice
- Radiological imagingultrasound,CT, MRI may be needed
- Vaginal examination is best completed by an obstetrician to assess for vaginal injury and ruptured membranes.

3) CAUTIONS

- **Complications:**
  - Vaginal Injury
  - placental abruption
  - uterine rupture
  - intra-peritoneal bleeding
  - Feto-maternal haemorrhage

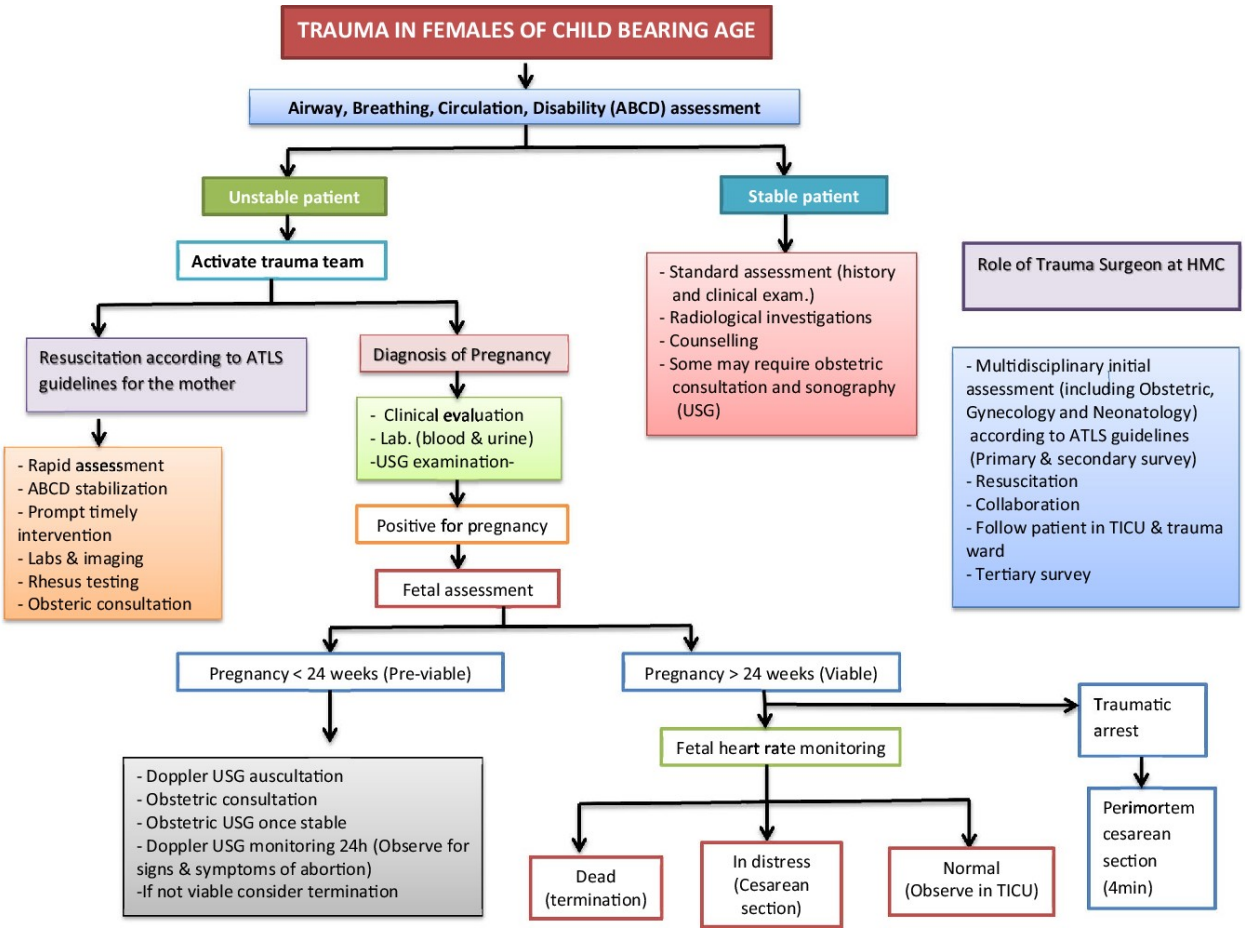

Figure from Al-Thani, H., et al. (2019). "Blunt traumatic injury during pregnancy: a descriptive analysis from a level 1 trauma center." Eur J Trauma Emerg Surg **45**(3): 393-401.

4) REFERENCES & ACKNOWLEDGMENT

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-Michael R. Foley, et al. Obstetric Intensive Care Manual. 3rd ed. McGrawHill Press. 2011