Third Trimester Motor Vehicle Collision with Placental Abruption and Fetal Demise

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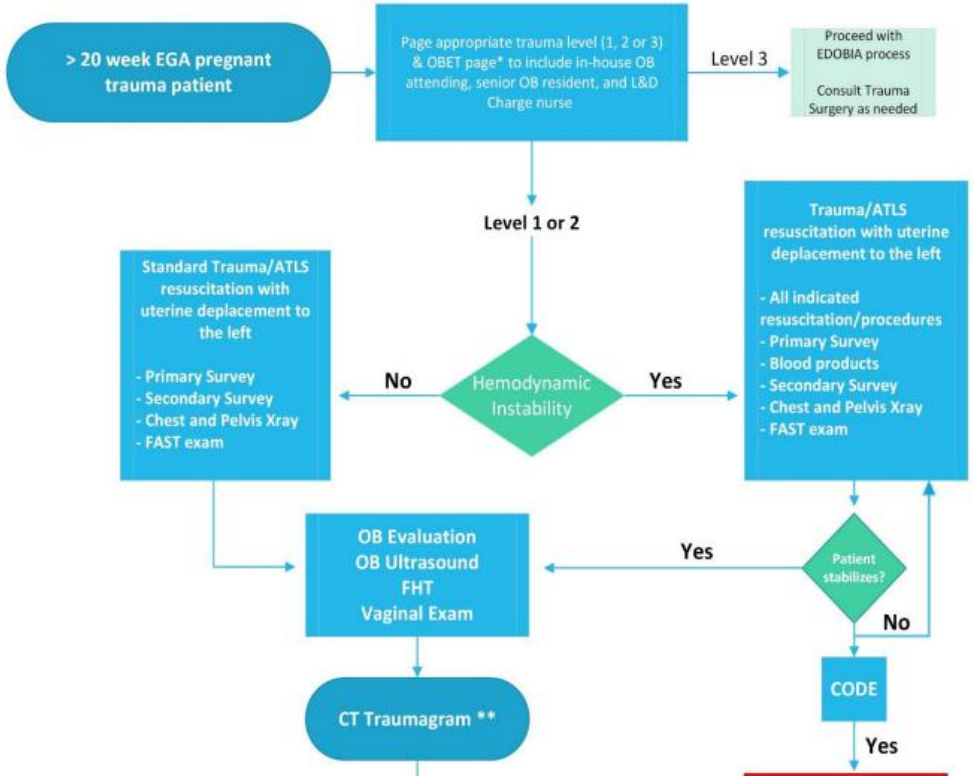
Background:

- The risk of placenta abruption after vehicular trauma increases with gestational age and MVC severity primarily due to strain forces and tensile failure (contrecoup)
- Many trauma centers have protocols in place for prompt recognition of fetal compromise
- Exam changes (i.e. vaginal bleeding) and ultrasound can be use but also limited in their ability to identify and predict placental abruption



VUMC OB trauma algorithm

Case Presentation

ED

- 26 G1P0 @ 30 weeks brought via helicopter following MVC w/ LOC
- FHR during transit normal, GCS 14 on arrival, gross RLE deformity with + seat belt sign
- Initially Level II trauma, downgraded to Level III in ED due to stability
- 50 minutes later, fetal bradycardia→OR for emergent Cesarean Delivery/ex-lap

OR

- Prompt arrival to OR→induction delayed for FAST exam
- RSI w/ in-line cervical stabilization, video laryngoscopy
- Midline laparotomy, CD w/ complete abruption noted, splenectomy/DCS
- Neonatal resuscitation attempted but unsuccessful

POST-OP

- Temporary abdominal closure, remained intubated until closure on POD1
- Subsequent imaging revealed R femoral shaft fx, sternal fx, bilateral rib fx w/ pulmonary contusions & bilateral ICA dissections
- Extubated POD2

Learning Points

SOAP
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Anesthetic Management:

- Management of the airway with C-collar/in-line Cervical stabilization, RSI
- Full extent of injuries may be unknown prior to Cesarean Delivery
- Anticipate hemodynamic instability, different surgical approach

Trauma assessment:

- Multidisciplinary coordination of care is challenging
- Be aware of facility's obstetric trauma protocol