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Management Strategies for Traumatic Injuries in Pregnant Women: A Comprehensive Literature Review

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Introduction

- The leading cause of nonobstetric death is traumatic injury (6 to 8% of all pregnancies). [1]
- 60% of Pregnant women who require hospitalization following a trauma progress to delivery. [6]
  - It is crucial to maintain the most up to date guidance on optimal management strategies for traumatic injuries.
- This review explores maternal and fetal considerations for imaging modalities, orthopedic surgical interventions, and post-injury strategic management.
- This review provides a comprehensive framework for managing trauma cases from the perspectives of OB/GYN, Emergency Medicine and Orthopaedics.

Methods

- This is a structured review of the current literature used to describe and understand the current management strategies for traumatic injury in pregnant women.
- Research was done via a database search through the Rowan-Virtua School of Osteopathic Medicine's research library. Pubmed was the sole database used.
  - Reviewed 8 peer-reviewed publications.
- Only selected articles published within the last 10 years.
- Search term strategy was "pregnancy" AND "trauma" AND "management".

Results

- Pregnancy is an important consideration in every reproductive aged woman with significant injuries.
- Initial care for injuries sustained during pregnancy begins with first responders in the field and in the ED.
- Stabilization of the mother is the priority.
  - Via obstetric services, proper positioning, fetal monitoring, lab studies, diagnostic imaging, and in some cases emergency c-section.[1]
- Maternal physiologic changes determine clinical management in trauma. [6]
- The best imaging exams (ultrasound, x-ray) do not present harm to the mother or baby.
- Important primary evaluation factors to consider are fetal movements, uterine contractions, and vaginal bleeding [3]
- Initial maternal stabilization includes leftward uterine displacement to improve cardiac output.
  - This is achieved by moving the uterus off of the IVC. [2]
- Early maternal optimization includes nasogastric intubation, oxygen supplementation (O2 sat >95%) , two large bore IV lines for serious injuries, and O-negative blood to avoid Rh alloimmunization. [4]
- Optimal perimortem c-section is within 5 minutes of arrest. [2]
- There have been reports of fetal survival and maternal benefit beyond 15 minutes. [2]
- Domestic violence is the most common trauma mechanism for pregnant women and triggers several obstetric complications. [6]

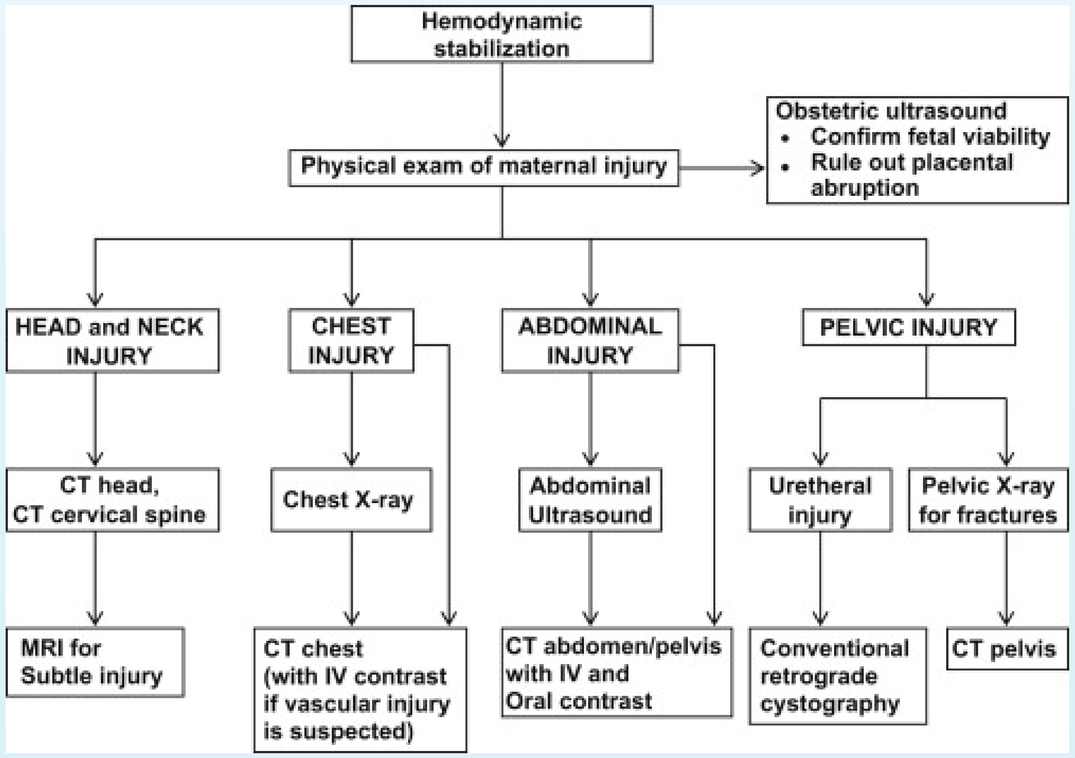

Figure 1: Initial Assessment and Monitoring of a Pregnant Patient

Conclusion

- Adverse outcomes of pregnancy include fetal loss, preterm delivery, and placental abruption.
  - This historically happens more frequently following trauma. [1]
- Perimortem cesarean delivery is generally indicated within 5 minutes of arrest for viable pregnancies ≥ to 23 weeks.[2]
  - There may be benefits of maternal or fetal survival beyond this point. [2]
- If the trauma experienced is non-emergent, it may be managed conservatively, delaying treatment until after delivery. [3]
- When medical attention is prompted, it is important to consider the physiologic changes the mother has experienced as a result of being pregnant. [3]
- Every woman who experiences trauma should be questioned about domestic or intimate partner violence, as it is the leading cause of trauma in pregnant women. [4]
- Crucial considerations for best outcomes for the mother and child include surgical positioning, medication administration, and diagnostic imaging. [7]

Sources

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