SOAP 2026 ANNUAL MEETING
MONTRÉAL, QUÉBEC, CANADA APRIL 29-MAY 3, 2026

Ante In Extremis: Acute Management of Prepartum Amniotic Fluid Embolism

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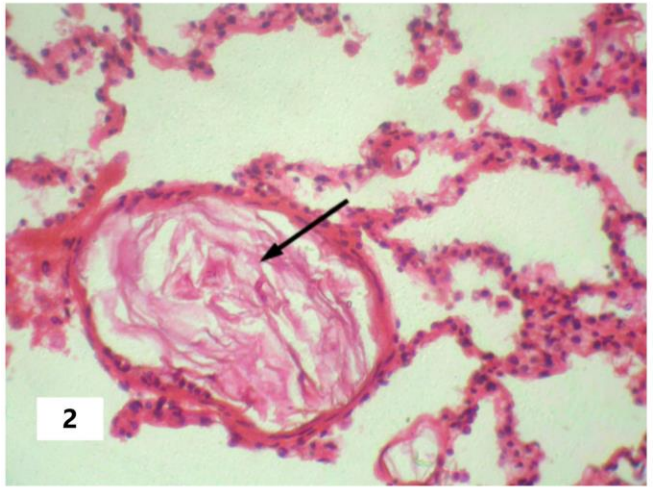
BACKGROUND

- Amniotic Fluid Embolism is a rare, life-threatening anaphylactoid reaction to placental components entering maternal circulation, often leading to rapid cardiovascular collapse.
  - Characterized by:
    - Hypotension
    - Hypoxia
    - Disseminated intravascular coagulopathy (DIC)
- Occurs 1 per 10-40 thousand births [1]
- Maternal mortality rate has been estimated at roughly 20% [2]
- Placenta accreta spectrum disorders thought to be most significant risk factor (10-fold increased risk) [3]
- Exact pathophysiologic pathways are unknown; marked elevation of pro-inflammatory cytokines (IL-6, IL-8, TNF-a), myoglobin and troponin (tissue destruction), and D –Dimer have been consistently observed [1]
  - Proposed pathologic mechanisms:
    - Systemic vasodilation
    - Pulmonary hypertension
    - Consumptive coagulopathy



Fetal squamous cells in maternal pulmonary microcirculation [1]

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2. Suissa, N., Czuzoj-Shulman, N., & Abenhaim, H. A. (2024). Amniotic fluid embolism: 20-year incidence and case-fatality trends in the United States. *European Journal of Obstetrics and Gynecology and Reproductive Biology*, *294*, 92–96. doi:10.1016/j.ejogrb.2023.12.034
3. Carlson K, Mikes BA. Amniotic Fluid Embolism. [Updated 2024 Jan 10]. In:StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK559107/

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CASE

- 32-year-old G3P2 at 39 weeks. PMH anemia, GBS positive status, and polyhydramnios (AFI 27).
- Presented for scheduled induction of labor; elected for a trial of labor after cesarean section. Had previously undergone cesarean in Africa with inadequate analgesia.
- Epidural placed without complication, adequate dermatomal level of analgesia achieved.
- Following induction of labor, decelerations noted on fetal heart tracing; obstetric team paused Pitocin and attempted maternal repositioning.
- No improvement with terbutaline; patient transported to OR for emergent cesarean.
- During transportation the patient began to exhibit seizure-like activity, found to have pulseless electrical activity.
- Code Blue initiation and CPR. Patient intubated; three minutes later a hypotonic infant delivered via perimortem cesarean.
- Six minutes following Code Blue activation, return of spontaneous circulation achieved.
- Arterial and central access obtained; massive transfusion protocol initiated (6 units pRBCs, 2 units FFP, 1 unit platelets, 2 units cryoprecipitate).
- In addition to two rounds of 1 mg epinephrine, 0.4 mg atropine, 8 mg ondansetron, and 30 mg ketorolac administered in adherence to AFE protocol.
- After two days of ventilatory and vasopressor support, patient extubated and weaned from pressors, later discharged. Neonate similarly weaned from ventilatory support and discharged in stable condition.

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TEACHING POINTS

- Importance of timely recognition and management of AFE are crucial in order to minimize morbidity.
- To optimize maternal and fetal outcomes, the obstetric anesthesiologist's efforts should address hemodynamic instability, respiratory distress, and fulminant coagulopathy.
- AFE may occur not only during delivery or postpartum, but also in the prepartum period. One should have a high suspicion for AFE as a possible cause of cardiovascular collapse in the interval immediately preceding delivery.