Anesthetic Management for Cesarean Section in a Parturient with Valerian Root-induced Liver Injury and Coxsackie Sepsis

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Stony Brook Medicine

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Background

Sepsis in pregnancy is a significant cause of maternal and fetal morbidity (1)
Key considerations:

- Determine source of infection
- Medical optimization
- Evaluate for indications requiring delivery

We report a challenging case of an emergent cesarean section in a woman with sepsis and complex comorbidities requiring critical

Case Presentation

- 32-year-old G3P1 at 32+5 weeks gestation
- Presenting with 3 days of progressive shortness of breath, pleuritic chest pain, jaw pain, and disseminated maculopapular rash
- Prior IV drug use on suboxone, history of endocarditis

Clinical Findings

Table 1. Labs at Presentation. Values listed in bold are abnormal, red are critical

Chemistry		Liver Function Tests		Hematology	
Na	**149**	Bilirubin T	**3.5**	WBC	**2.26**
K	**1.9**	Bilirubin D	**2.6**	RBC	**3.39**
Cl	105	ALT	**250**	Hemoglobin	12.4
Bicarb	**6**	AST	**1841**	Hematocrit	38.7
Glucose	**32**	Alk Phos	**957**	Neutrophil	**1.53**
BUN	7	Albumin	**2.7**	PT	**21.5**
Cr	0.94				
Lactic Acid	**20.6**				
Anion Gap	**38**				

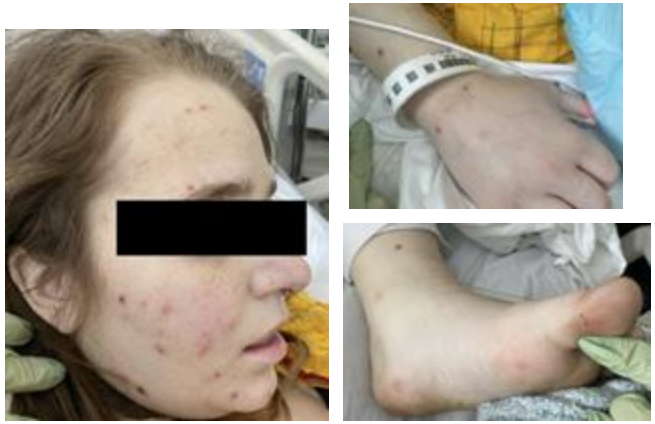

Figure 1. Disseminated maculopapular rash

- Tachycardia, hypothermia, tachypnea, hypertension
  - Temp: **35.1 C**
  - Pulse ox: 100% on NC
  - HR: **120** bpm
  - RR: **34**
  - BP: 147/86
- Limited jaw opening, edematous tongue
- Nonstress test: Moderate variability, no immediate indication for delivery
  - Plans made to prepare for acute change in status
- ICU admission for further stabilization
- Broad differential considered → Interdisciplinary specialists involved

1 Mohan, S., Bayo, A.I., Okunoye, G. (2024). Obstetric Sepsis and Management. In: Shaikh, N., Chanda, A.H. (eds) Applied Microbiology in Intensive Care Medicine. Springer, Singapore. https://doi.org/10.1007/978-981-97-4006-2_14

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Diagnostic Workup

Endocarditis History	• Negative echo with preserved ejection fraction • Endocarditis history was in 2018, patient on suboxone and no longer IVDU

Transaminitis	• Valerian Root-induced Liver injury
	  ○ Supplement aimed to reduce headaches
	  ○ Limited research on safety in pregnancy
	• Treated with N-Acetylcysteine with improvement of LFTs and RUQ pain
	• Avoided hepatotoxic medications

Sepsis Etiology	• Rash concerning for various infectious or rheumatologic causes • Confirmed to be due Coxsackievirus A with a positive enterovirus PCR • Jaw pain caused by mouth sores

Perioperative Management

- Next day after admission: Biophysical profile of 0/10 → Emergent cesarean delivery
- Neuraxial anesthesia contraindicated due to systemic infection
- **Airway concerns:** Limited jaw mobility due to mucositis, improved with sedation
- **General anesthesia approach:** Rapid sequence induction
  - **Induction agents:** Etomidate, propofol, succinylcholine
  - **Maintenance agents:** Propofol, rocuronium, fentanyl, no volatile agent
- EBL: 800 cc. APGAR: 6 and 8 at 1 and 5 mins respectively

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Discussion

- Sepsis in pregnancy requires careful consideration of maternal stabilization and fetal status when determining timing of delivery
- Meticulous anesthetic planning and interdisciplinary collaboration are essential in managing critically ill obstetric patients
- The complexity of the case required: