Management of Cocaine-induced Type A Aortic Dissection at 30 Weeks Gestation

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Background

- Aortic dissections during pregnancy are extremely rare, comprising approximately 0.4% of all dissections.
- Risk factors for aortic dissection include connective tissue disorders, smoking, trauma, hypertension, and stimulant (cocaine) use.
- Both cocaine use and pregnancy have been shown to alter the composition and strength of the aortic intima, increasing the likelihood of dissection when combined.
- Sympathetic surge from cocaine use → Amplified hyperdynamic physiologic changes of pregnancy → Further increases in heart rate, cardiac output, and circulating blood volume → Increased stress on aortic intima → Increased likelihood of dissection

1. Annals of Thoracic Surgery 103(4):1199–1206.
2. Am J Case Rep 2023; 24:e940628.
3. Case Rep Womens Health. 2020 Oct 2;28:e00261

SOAP 2026 ANNUAL MEETING
SOAP Society for Obstetric Anesthesia and Perinatology
MONTRÉAL, QUÉBEC, CANADA
LE WESTIN MONTREAL
APRIL 29-MAY 3, 2026
FROM DISCOVERY TO DELIVERY: BRIDGING RESEARCH AND CLINICAL CARE IN OBSTETRIC ANESTHESIA

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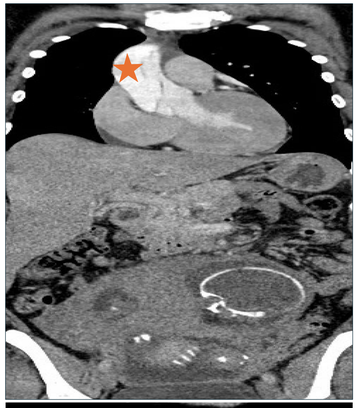
A 36-year-old G6P3 at 30 weeks' gestation presented from an outside hospital with chest pain and CT/Echo findings of a Type A dissection.

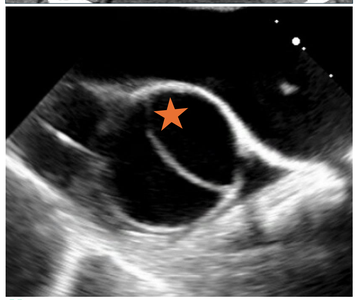
Past medical history notable for significant, ongoing intrapartum cocaine use.

She underwent immediate cesarean section with cardiac anesthesia. Intra-op TEE demonstrated a large dissection flap originating in the aortic root and extending into the aortic arch.

Preemptive bilateral uterine artery embolization and admission to the ICU for impulse control and stabilization.

On POD 3, underwent successful aortic root and hemi-arch repair with aortic valve replacement.





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Key Takeaways

- Mortality for unrepaired Type A dissection increases 1-2% for every hour that it goes unrepaired.
- The degree of heparinization required for cardiac bypass poses a life-threatening hemorrhage risk if required during or immediately following a cesarean section. Uterine artery embolization may be required, and IR should be notified in advance.
- Multidisciplinary management between the cardiac surgery, anesthesia, and OB/GYN teams is paramount to survival in these cases, as there are significant risks to proceeding with each procedure and the risk/benefit discussion is imperative.

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