General anesthesia for cesarean delivery in a patient with a stented coarctation of the aorta with signs of restenosis: a case report

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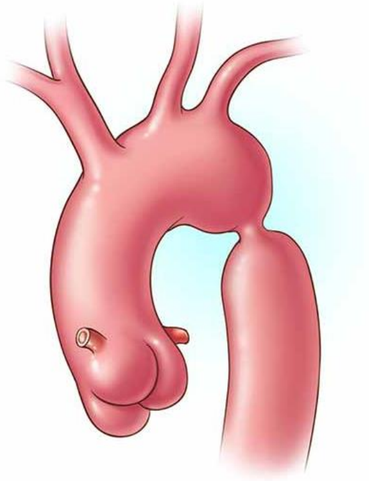

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Image: https://my.clevelandclinic.org/health/diseases/16876-aortic-coarctation

SOAP 2025 Annual Meeting

APRIL 30 - MAY 4, 2025

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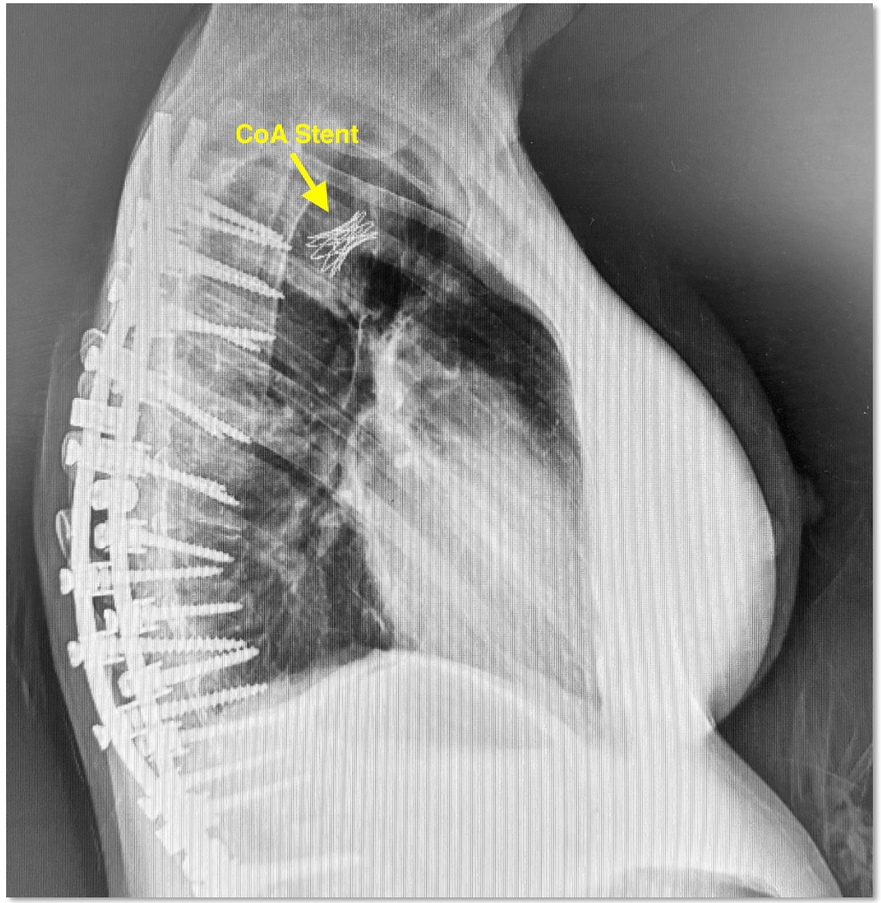
Background

- 27-year-old, 37 weeks and 1-day primigravida, singleton pregnancy – January 6th, 2025
- Extensive spinal fusion due to severe cifoscoliosis in 2018
- Corrected congenital coarctation of the descending thoracic aorta in 2017 (endovascular stent)
  - Nov/2024: new-onset progressive fatigue and exercise intolerance - 3rd tri. of pregnancy
  - Dec/2024: TTE showing signs of reestenosis, with a 50mmHg systolic gradient across stent
- Scheduled to an elective cesarean delivery under general anesthesia at HMSJ – January 7th, 2025



Pregestational radiography – Lateral incidence

Perioperative management

1. Basic ASA + additional oximeter at the RLL + single 18G IV + awake 20G A-line at the RRA
2. Pre-O_2 + RSI (Fentanyl + Etomidate + Rocuronium) + single-attempt VL with a 6,5mm OTT
3. Cord clampping in under 5min - Apgar 8 and 9, 2785g
4. 3x Ephedrine 5mg IV boluses directed to correct signs of hypoperfusion at the lower limbs (goal: SBP 160 – 180mmHg)
5. GA maintained with BIS-guided Propofol and Remifentanil + Bilateral QL3 with 20ml 0,375% Ropivacaine on each side
6. Lactated Ringer: 1100ml / Bleeding: 700ml
7. OR extubation after TOF-guided reversal of NMB with Sugammadex + immediate PO recovery in ICU
8. Transference to the HDU on POD #2, uneventful recovery

Teaching points

- CoA accounts for 6 to 8% of all CHD[1]
- Most females with CoA reach childbearing age[1]
- Patients can "step up" their mWHO Class during pregnancy[2]
- Recoarctation is more common that we think (~10%)[3]
- In symptomatic cases, guide intraoperative hemodynamic interventions through monitors at both pre and post defects sites (upper and lower limbs)
- **All patients with a history of CoA - corrected and uncorrected - should be reassessed by a CHD specialist during preconception counseling[4]**

1. Beauchesne LM, Connolly HM, Ammash NM, Warnes CA. Coarctation of the aorta: outcome of pregnancy. *J Am Coll Cardiol*. 2001;38(6):1728-1733. doi:10.1016/S0735-1097(01)01617-5
2. Brickner ME. Cardiovascular Management in Pregnancy: Congenital Heart Disease. *Circulation*. 2014;130(3):273-282. doi:10.1161/CIRCULATIONAHA.113.002105
3. Isselbacher EM, Preventza O, Hamilton Black J, et al. 2022 ACC/AHA Guideline for the Diagnosis and Management of Aortic Disease: A Report of the American Heart Association/American College of Cardiology Joint Committee on Clinical Practice Guidelines. *Circulation*. 2022;146(24). doi:10.1161/CIR.0000000000001106
4. Van Hagen IM, Roos-Hesselink JW. Pregnancy in congenital heart disease: risk prediction and counselling. *Heart*. 2020;106(23):1853-1861. doi:10.1136/heartjnl-2019-314702