General Anesthesia for Cesarean Delivery in a Parturient with Pre-eclampsia and New-Onset Complete Heart Block

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Introduction

- The incidence of complete heart block (CHB) is 1 in 100,000 pregnancies
- Neuraxial anesthesia carries the risk of sympathectomy-induced bradycardia, but has been performed successfully in patients with CHB

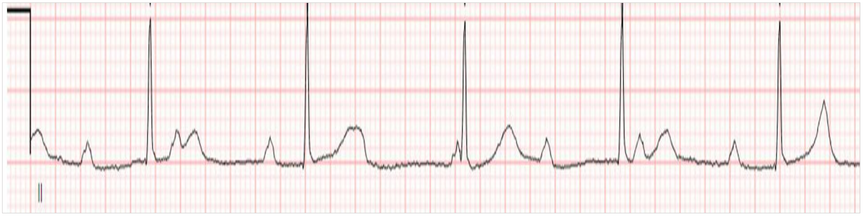

Figure. Twelve-lead EKG demonstrating complete A-V dissociation with a ventricular rate of 48 bpm.

Case Presentation: Complete Heart Block

24-year-old G1P0 at 36w2d presented with hypertension and bradycardia (HR 39-42 bpm)

ECG confirmed third-degree heart block with a junctional escape rhythm (**Figure**)

Hemodynamically stable; mildly dizzy

Pre-eclampsia confirmed

Infectious, autoimmune, and cardiac workups negative

Multidisciplinary team recommended cesarean delivery at 36w5d for breech presentation and maternal indications

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Case Management: Cesarean Birth

- Pre-induction arterial line placed
- General anesthesia induced without incident
- Transvenous pacer placed into SVC in case of need for pacing (**Figure**)
- Norepinephrine infusion maintained for hemodynamics
- Neonate: normal umbilical cord gases
- Intraoperative rhythm: CHB (rates 43-55 bpm)
- Analgesia: acetaminophen, methadone, bilateral TAP blocks
- Recovery: without incident; discharged home on POD 3
- Postoperative rhythm: CHB, with plan for cardiology follow-up in 4 weeks
- Never required pacing

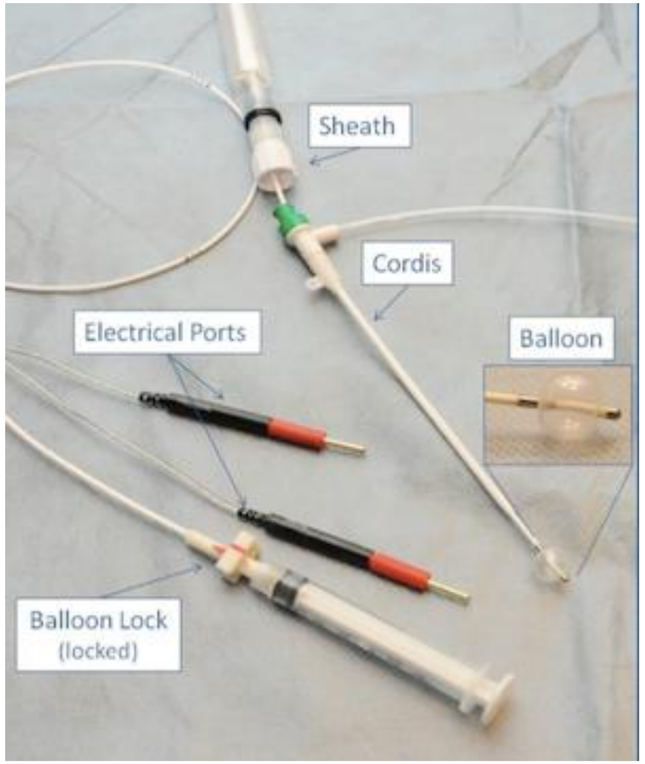

Figure. Transvenous pacing setup.
Source: tamingthesru.com

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Discussion

Although neuraxial anesthesia can be safe in some patients with CHB, some patients have required emergent pacing

General anesthesia can be performed safely in patients with CHB

Individualized planning and care coordination is necessary to optimize outcomes for high-risk patients: **Anesthesiology, cardiology, obstetrics/MFM, neonatology**

Heart block can be induced by pregnancy-related cardiac changes and doesn't necessarily require prompt pacemaker implementation

Close follow up may be an appropriate strategy for patients with pregnancy-associated CHB, as they are monitored for spontaneous resolution

A pacemaker may be indicated if CHB fails to resolve in the postpartum period

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