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Bezold-Jarisch Reflex with Elective C-Section under Epidural Anesthesia

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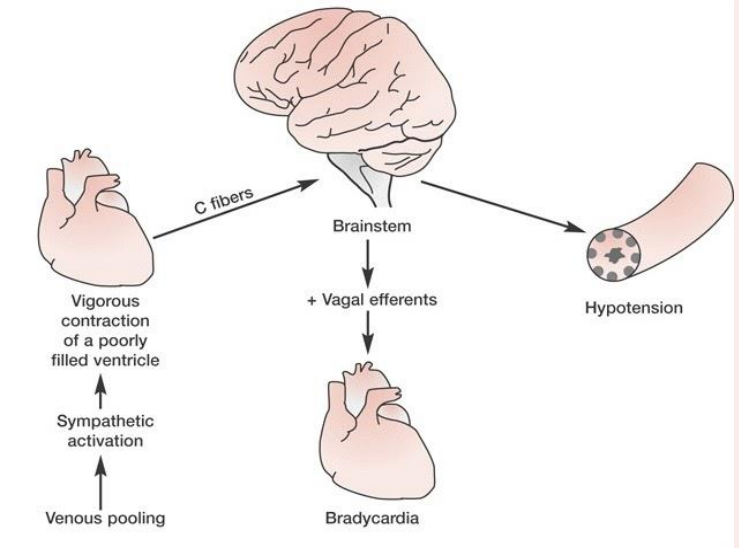
Background

- BJR is a cardioinhibitory reflex mediated by vagal sensory neurons
  - Classified by hypopnea, bradycardia, hypotension, syncope
- More commonly known to occur after acute MI, we describe a unique case of BJR occurring during epidural placement of a patient with a complex cardiopulmonary history



Clinical History

- 40F G6P2032 at 34w0d w/ monochorionic-diamniotic twin gestation, seen in high risk anesthesia clinic
- Complicated by fetal growth restriction, gestational diabetes
- Cardiac history: total anomalous pulmonary venous return with pericardial baffle, ASD repair, pulmonary valvulotomy in 1990, and pulmonary valve replacement in 2009 for severe pulmonary insufficiency
  - Echo findings: pulmonary valve stenosis, insufficiency, and a dilated right ventricle
  - Clinically asymptomatic

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Reference: The Bezold-Jarisch reflex - Renal Fellow Network

Clinical Scenario

- During final bolus of bupivicaine 0.25% while placing epidural, patient lost P-waves and junctional rhythm was noted
- Became bradycardic to 40s, hypotensive to 80s/40s, and lost consciousness
  - Ultimately needed 10mg ephedrine and norepinephrine infusion for hemodynamic stability
  - Required short term oxygen support until p waves returned and blood pressure stabilized

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Prevention/Discussion

- Due to her significant cardiopulmonary history, multiple steps were taken to prevent hemodynamic collapse
  - Seen in high risk clinic
  - Arterial line placed for constant monitoring
  - Epidural placed over spinal to avoid risk for hypotension
  - Use of ephedrine over phenylephrine to avoid reflex-mediated bradycardia
- What is the importance of multidisciplinary care management in high risk patients?
  - Using multiple fields of expertise to devise a safe plan of delivery for both mother and babies
  - In this patient specifically, cardiology, anesthesiology, and obstetrics all played a role in pre-partum planning