Anesthesiologic Considerations in a Parturient with Brugada Syndrome and Immune Thrombocytopenia

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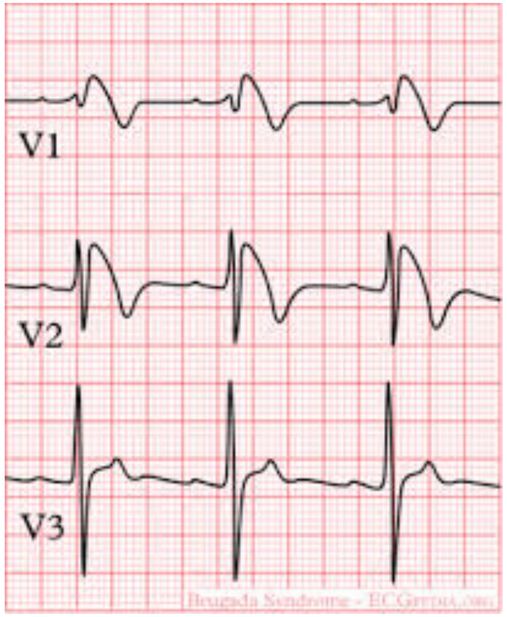
- Brugada Syndrome (BrS)
  - Rare cardiac channelopathy predisposing patients to ventricular arrhythmia and sudden cardiac death[1]
    - Most common mutation in Na channels
    - Often presents with ECG findings of pseudo-right bundle branch block and coved ST segment elevations in V1-V3[1] (see right)
  - Numerous pharmacologic agents implicated
    - Notable examples: propofol, local anesthetics (particularly bupivacaine), ketamine[2]
  - Anesthetic approach in labor often emphasizes early neuraxial (NA) analgesia[3]
    - Limits sympathetic surge + arrhythmia risk



BrugadaDrugs.org

Safe drug use and the Brugada syndrome

1: Am J Cardiol (2017) Sep 120:1031-1036
2: J of Clin Anes (2017) Feb 36:168-173
3: Cureus (2025) Sep 17(9)

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27 yo G2P1001 @ 30^0 seen by OB anesthesia precare clinic given FHx BrS, and Na channel mutation a/w BrS

- No classic findings of BrS, but frequent palpitations → ambulatory ECG patch and close cardiology care throughout pregnancy
  - Early epidural analgesia and continuous telemetry monitoring recommended
    - Ropivacaine recommended over bupivacaine given relatively lower cardiotoxicity
  - Plan for single bolus dose of propofol if GA required, with volatile maintenance
- Course complicated by immune thrombocytopenia (ITP) in 2^{nd} and 3^{rd} trimesters
  - Plt 76 at 37w
  - Hematology consult recommended prednisone prior to scheduled IOL @ 39w
- On presentation for IOL, plt improved to 104
  - Telemetry monitoring initiated
  - Uncomplicated epidural placement and loading with bolus dose 15 ml 0.125% bupivacaine + 50 mcg fentanyl
  - Epidural infusion 0.1% ropivacaine + 2 mcg/ml fentanyl started
- Remainder of L&D course unremarkable, pt discharged home on PPD 2

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- Balance of clinical priorities
  - Avoid ventricular arrhythmias
    - Analgesic control to avoid endogenous catecholamine release
    - Epidural ropivacaine infusion rather than bupivacaine
  - Safety of neuraxial anesthesia given concomitant ITP
- Early multidisciplinary involvement
  - Hematology input vital in improving plt count by day of induction, permitting safe NA placement
- Contingency planning
  - Remifentanil PCA discussed with pt in precare clinic as option to limit sympathetic surge if NA not possible

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