Hemorrhagic Pericardial Effusion: An Atypical Presentation of Pre-Eclampsia

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Introduction

- Pre-eclampsia is a disease of pregnancy consisting of high blood pressure and proteinuria, with an incidence between 2-10% worldwide [i]
- In patients with pre-eclampsia, ~ ¼ have severe features such as pleural and pericardial effusions [ii]
- 73% of patients with severe pre-eclampsia had pericardial effusions [iii]
- Hemorrhagic pericardial effusions are very rare, with the exact incidence unknown

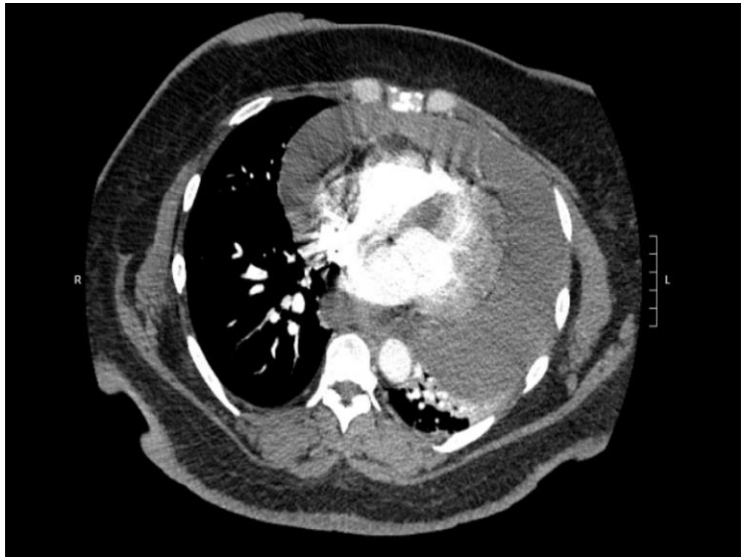

Figure 1. CTA Chest demonstrating Large Pericardial Effusion

Case Presentation

- 36-year-old G3 P3003 at 38w0d with a history of hypertension, type 2 diabetes, and anemia who initially presented to an outside hospital for shortness of breath and bilateral lower extremity edema
- Initial concern was for pulmonary embolism, CTA ordered
- CTA negative for PE, however, massive effusion shown with concern for tamponade
- Admission labs to ED, notable for Hgb 6.6
- Patient was transferred to our hospital for emergent pericardiocentesis
- On arrival patient was tachycardic to 110s to 120s and hypertensive to systolic BP 140s to 150s
- Initiated on clevidipine drip for afterload reduction

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Intraoperative Management

- Due to her tamponade physiology and concern for decompensation with positive pressure ventilation, pericardiotomy was completed under local anesthesia
- Patient received continuous positive airway pressure FiO2 50% 0/5
- Plasma-Lyte and one unit pRBC administered in the operating room to maintain preload and cardiac output
- Local administered by the cardiology team
- 2 L of blood was aspirated
- 6fr pericardial drain was left for continuous drainage
- Patient endorsed symptomatic improvement

Delivery/Post-Op Management

- Over the next 24 hours, the pericardial drain put out 700ml bloody pericardial fluid
- Due to continued elevated blood pressures and concern for pre-eclampsia, the patient was placed on a magnesium infusion
- Delivery:
  - Patient underwent repeat cesarean section under combined spinal epidural anesthesia
  - Clevidipine stopped and phenylephrine started to tx sympathectomy
  - Epidural re-dosed with 2% lidocaine w/ epi for adequate analgesia
  - Uterine torsion noted during C/S causing marked hypotension to systolic 70s. Torsion quickly manually resolved by OB team
  - QBL: 980ml
- Patient remained inpatient for an additional week for monitoring of her pericardial drain
- Pericardial drain put out 1.6 liters of pericardial fluid over the next 7 days before being removed prior to discharge

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Discussion

- Although hemorrhagic pericardial effusions in the setting of malignancy have a high mortality in the setting of preeclampsia, prognosis is good with quick identification and treatment [iv]
- Patient had a positive outcome because the pericardial effusion was recognized and treated promptly
- Important to maintain a broad differential in the setting of pregnancy
- Maintaining interdisciplinary collaboration and communication between anesthesiology, cardiology, obstetrics and nursing teams is key

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