Challenges in Diagnosis and Management of Sickle Cell Disease and HELLP Syndrome

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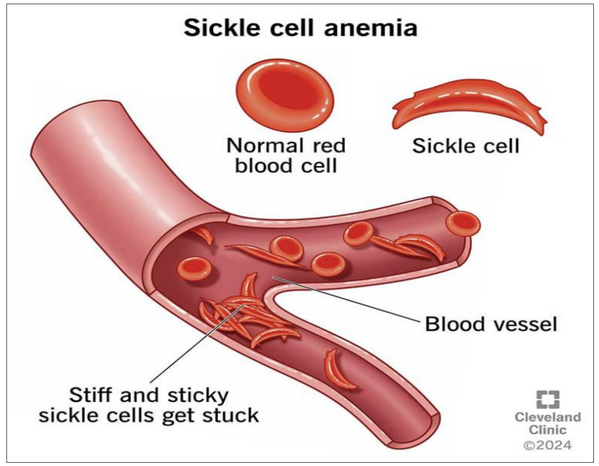
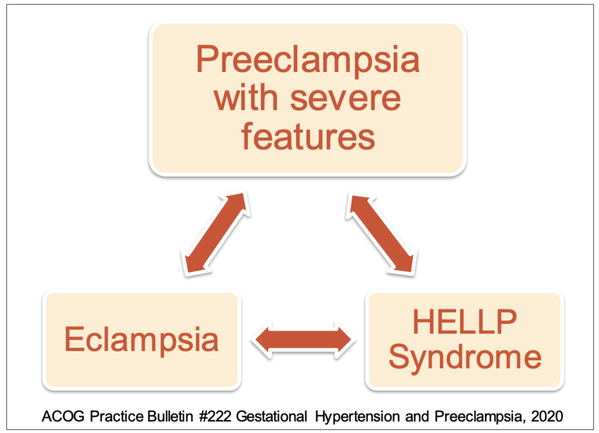
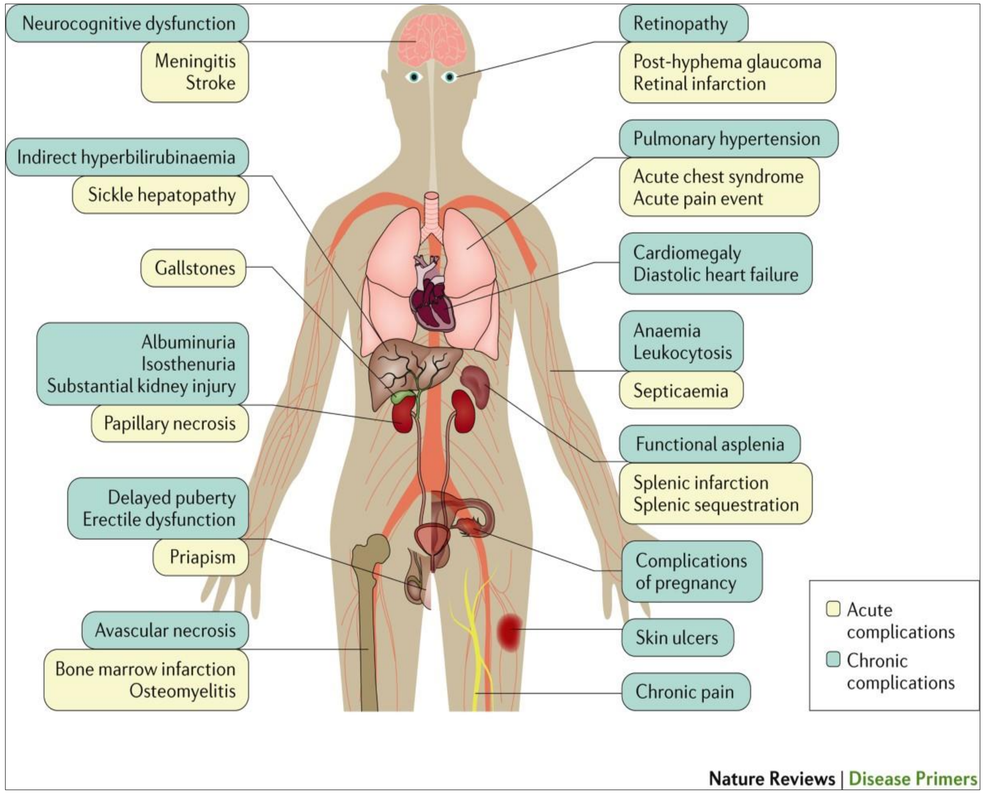
- Sickle cell disease (SCD)
  - Hemolytic anemia + vaso-occlusive crises (VOC)
    - Acute chest syndrome
    - Pulmonary arterial hypertension
    - RV failure + CV collapse
- VTE, PreE, PPH → ↑ frequencies in the SCD parturient
- HELLP syndrome: could easily be missed due to overlapping clinical presentation w/ SCD







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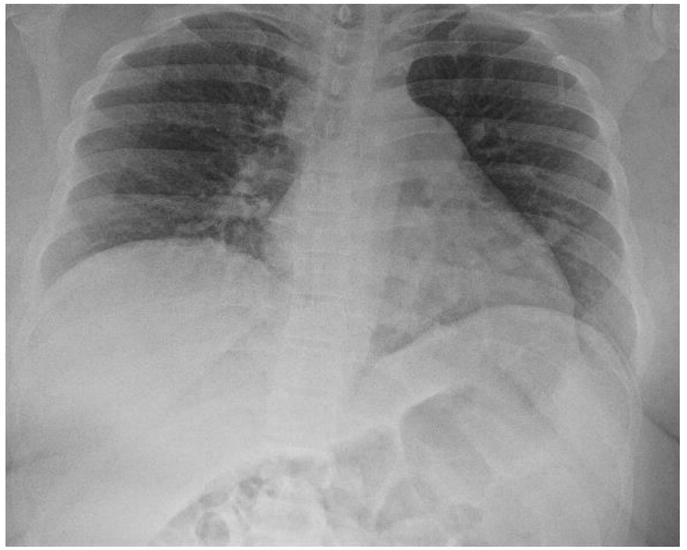
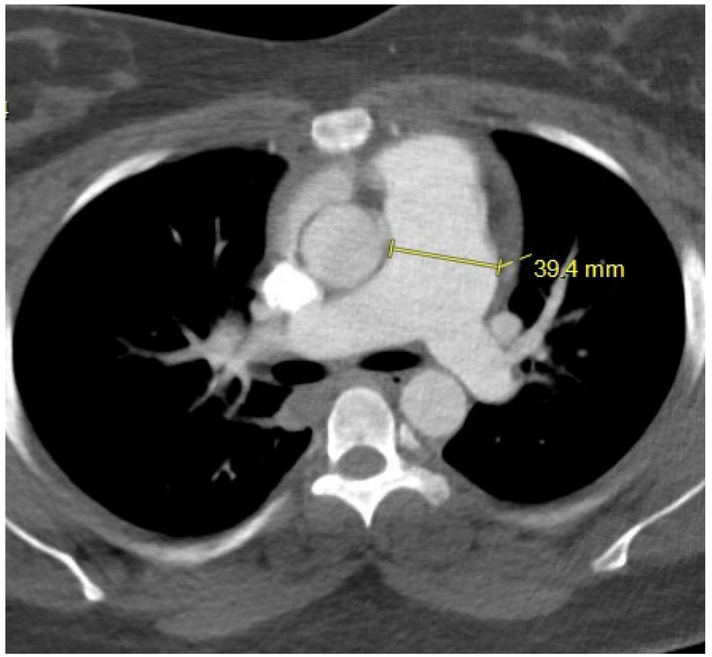
- 26-year-old woman, G2P1 at 31w6d
- Chest wall pain, extremity pain, tachycardia, dyspnea, ↑ O_2 requirement
    - VOC earlier this pregnancy – again?
    - DDX: Acute chest syndrome, PreE/HELLP, PE
- Labs: hemolysis (anemia, ↑ LDH, ↓ haptoglobin), severe thrombocytopenia, ↑ AST
- CXR: Pulmonary edema
- CT chest: no PE, 3.9 cm PA dilation
- TTE: EF 60%, mild RV dilation, ↓ RV function





‼ HELLP diagnosis made → **‼ Emergent cesarean delivery under GA**

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- Extubated POD #1 in ICU
- Labs: platelet nadir 32K (then recovered), LDH and AST normalized
- Hypoxic respiratory failure
  - Diuresis
  - Broad-spectrum IV antibiotics to cover for ACS
- Outpatient workup recommended for pHTN
- Clinically improved, discharged HD #10

LEARNING POINTS: SCD IN PREGNANCY

DIAGNOSTIC CHALLENGE	• Complex pathophysiology of sickle cell disease (SCD) and pregnancy can obscure diagnosis of life-threatening conditions like **HELLP syndrome**.
CARDIOPULMONARY RISK	• Pulmonary arterial hypertension (**PAH**) and right ventricular (**RV**) dysfunction are serious SCD complications that can be detrimental in pregnancy.
HEALTH DISPARITIES	• SCD disproportionately affects **Black populations** and contributes to racial disparities in maternal morbidity and mortality.
MANAGEMENT IMPACT	• Antenatal optimization can significantly **improve maternofetal outcomes**.

Integratad, multidisiciplinary care is essential to reduce complications and improve outcomes for individuals with SCD throughout pregnancy.

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