Emergency Medicine FOUNDATIONS

Foundations Frameworks

Approach to the Sickle Cell Crisis

Author: Quentin Reuter, MD
Editors: Jon Van Heukelom, MD; Kristen Grabow Moore, MD, MEd

Always Evaluate:
- **Cardiopulmonary S/Sx**
- **Hemoglobin Level**
- **Reticulocyte Count**

Vaso-Occlusive Crisis

- Caused by anemia, dehydration
- These patients typically have higher resting hgb
- Management:
  - Fluids: PO vs D5 1/2 NS at maintenance rate vs NS bolus if hypotensive
  - Opioids: morphine or dilaudid
  - Tylenol
  - PO Benadryl
  - Avoid NSAIDs or O2
- Rule out: osteomyelitis, avascular necrosis, gallstones, septic arthritis, acute chest syndrome

- Cardiopulmonary Symptoms? -> Evaluate for **Acute Chest Syndrome**
  - Leading cause of death
  - Diagnosis: Infiltrate on XR chest plus…
    - Hypoxia
    - Fever
    - Chest pain
    - Respiratory signs/symptoms
  - Management: antibiotics, fluid resuscitation as needed, exchange transfusion, hematology consult, consider ICU admission

Anemic Crisis

- Presents with less pain
- Patients may have pulmonary HTN, leg ulcers, increased risk of sudden death
- Obtain a hemoglobin, reticulocyte count, perform rectal exam

Causes:
- Transient Red Cell Aplasia
  - Low reticulocyte count
  - Management: isolation and call hematologist
- Splenic Sequestration
  - Typically seen pediatric patients
  - Large spleen, LUQ pain, rapid drop in hemoglobin, high reticulocyte count
  - Management: transfusion, volume resuscitation
- Hemolytic Crisis
  - Elevated LDH, elevated reticulocyte count, elevated LFTs/bilirubin

Special Circumstances

- Hyphema, priapism, CVA (even in peds), gallstones, osteomyelitis, sepsis/fever