

Sickle Cell Pain Crisis

- Sickled cells occlude arterioles and cause tissue infarction, resulting in recurrent painful episodes, and a variety of serious organ system complications that can lead to life-long disabilities and even death.
- Causes: Precipitated by infection, fever, dehydration, or exposure to low oxygen tension (high altitude travel).
- Clinical manifestations: Characterized by severe pain, typically of the back, limbs, ribs, lasting 5-7 days. Pattern of pain in a given patient usually consistent from crisis to crisis. If new pain, consider an alternative diagnosis.

Treatment:

1. Oral hydration with 3-4 liters of fluid per day. We suggest to start 0.5 to 1 L NS bolus, then maintainance D51/2NS at 150-250 cc/hr.
2. Pain management: These patients are usually on chronic opioids. Start dose of IV morphine based on patient's prior dose requirements, or start with 2-5 mg morphine every 3-4 hours. Convert to PO once IV dose approaches equal analgesic home regimen. Perform assessments every 20 min and escalate as needed.
3. Supplemental O₂ if hypoxia is present. Provide incentive spirometry.
4. Provide stimulant (not osmotic) laxatives.
5. Avoidance meperidine (can precipitate seizures), and ketorolac (associated with AKI).
6. Evaluate for SCD complications associated with pain (eg, avascular necrosis of the hip, acute chest pain syndrome, splenic sequestration). CBC, retic count, cultures, lytes, BUN, vreatinine, bilirubin, UA, CXR, blood type and screen.

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