

Pain Management Algorithm for Patients With Sickle Cell Disease in Vaso-Occlusive Crisis

Emergency Department/Outpatient Hematology Clinic



Emergency Level: Triage Level 2
 Patients may call CBCC Heme clinic if having pain and may be told to come into the clinic for treatment. If after hours or unable, they will be directed to present to DCMC ED.

PURPOSE:
 To administer pain medication within 30 minutes of patient's arrival to the Emergency Department & CBCC Heme Clinic

- Administer **Fentanyl 2 mcg/kg intranasal (max 100 mcg/dose)**
- Place PIV/Access Port
- Obtain labs: CBC, retic, CMP, urine HCG (females >10 years)
 - If ill-appearing: T&S, Hgb electrophoresis (Stat)
- If febrile: Use SCD Fever Pathway concurrently
- If chest pain w/ hypoxia or fever: Concurrent acute chest treatment
 Notify hematology if CXR concerning for acute chest
- If ordered, give opioid premeds (i.e. PO diphenhydramine)
- Offer heat packs to painful sites
- Continuous pulse oximetry

- Triage Questions**
- « History of acute chest
 - « Last pain crisis
 - « Current fever, cough, chest pain
 - « Individualized pain plan

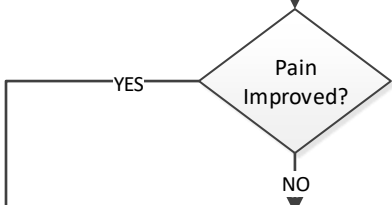
For patients with an individualized pain plan, check for a High Alert Plan (HAP). Contact hematology provider prior to 1st medication.

GOAL:
 0-30 Minutes

- Administer:**
- Morphine 0.1 - 0.2 mg/kg/dose IV (max 8 mg) **OR**
 - Hydromorphone 0.015 mg - 0.02 mg/kg/dose IV (max 1 mg) **OR**
 - Fentanyl 2 mcg/kg IV (max 100 mcg) - ED ONLY
- AND**
- Ketorolac 1 IV 0.5 mg/kg/dose IV (<16yo max 15mg, >16yo max 30mg) x 1 dose
- AND**
- 10ml/kg NS bolus (max 1L) over 60 minutes. If concern for dehydration, give 20ml/kg bolus (max 1L).
 - Then start 1xM IVF.
- If unable to obtain IV access: Oxycodone 0.1 mg/kg PO (max 10 mg)

- Contraindications to ketorolac:**
- Pregnancy
 - Renal impairment
 - Last dose of ketorolac within 5 days
 - Last dose ibuprofen within 6 hours
 - Bleeding concerns
 - History of or concern for renal impairment

GOAL:
 31-60 Minutes

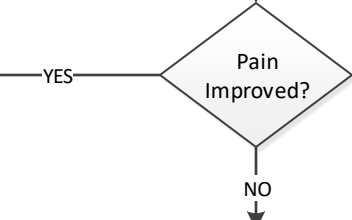


- Give second dose of narcotic pain medication
- Notify provider before administration

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 RN to reassess pain 30 minutes after each pain medication administration and notify provider.
 If patient asleep, wake patient up to reassess pain as directed.

GOAL:
 61-90 Minutes

- Discharge Criteria:**
- Observe for 1 hour post narcotic
 - Encourage PO intake
 - If patient comfortable managing pain at home, discharge home with pain plan/regimen
 - Follow up appointment in clinic
- ED:**
- Page Hematology for prior to discharge for follow up plan
 - Refill home pain medication for 2-3 day supply if needed
- Clinic:**
- Ensure opioid refill if needed



- Give third dose of narcotic pain medication
- **ED:** Contact Hematology Team for further management
- **Clinic:** Provider decision on patient admission to inpatient unit or discharge home with appropriate follow up plan.

Approved by the Pediatric Evidence-Based Outcomes Center Team

Revision History

Original Date Approved: May 20, 2019

Revision Dates: **April 2023** - Addition of Pain Management Algorithm for Patients With Sickle Cell Disease in Vaso-Occlusive Crisis

Emergency Department/Outpatient Hematology Clinic

Next Review Date: May 2027

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Recommendations

Practice recommendations were directed by the existing evidence and consensus amongst the content experts. Patient and family preferences were included when possible.

Approval Process

EBOC guidelines are reviewed by DCMC content experts, the EBOC committee, and are subject to a hospital wide review prior to implementation. Recommendations are reviewed and adjusted based on local expertise.