

PROTOCOL FOR MANAGEMENT OF ACUTE PAIN CRISIS IN CHILDREN WITH SICKLE CELL DISEASE

Child with SCD reports to OPD/Emergency with acute pain

Check BP, SpO₂, Pulse rate, Respiratory Rate, Temperature

Assess pain severity based on FLACC/Pain scoring based on age

Ask about any analgesic drugs already taken by patient for the current episode of pain and escalate accordingly

<p>Mild pain</p> <p>Pain scale (1-3)</p> <p>FLACC(1-3)</p>	<p>Moderate pain</p> <p>Pain scale (4-6)</p> <p>FLACC (4-6)</p>	<p>Severe pain</p> <p>Pain scale (7-10)</p> <p>FLACC (7-10)</p>
<p>Manage at home.</p> <p>Adequate oral hydration</p> <p>DRUGS:</p> <p>a) Paracetamol 15mg/kg/6hrs</p> <p>b) NSAIDS (Naproxen 5-7mg/kg/8hrs, Ibuprofen 10mg/kg/8hrs</p>	<p>May consider hospitalisation on case-to-case basis.</p> <p>Hydration IV/ Oral- 60ml/kg/day</p> <p>NSAIDS + weak opioids like Tramadol/Codeine 1-2mg/kg/4-6hrs</p> <p>(Paracetamol+ Tramadol can be given)</p> <p>Assessment of pain every 60mins</p>	<p>Hospitalisation</p> <p>Hydration with IV fluids</p> <p>NSAIDS and Injectable opioids eg. Fentanyl - Give bolus dose 0.5mcg/kg/dose. Can be repeated after 2hrs.</p> <p>Pain assessment every 30 mins.</p> <p>If no response to bolus dose, consider infusion of Fentanyl.</p> <p>Continue pain assessment every 30-60 mins.</p> <p>If no relief may consider Ketamine Infusion – 0.25-0.5mg/kg bolus, followed by 0.05-0.25/kg/hr infusion</p>

1. As per ASH guidelines, adults and children with SCD presenting with acute pain related to SCD, assessment and administration of analgesia should be ensured within 1 hour of emergency department with frequent reassessments (every 30-60 minutes)
2. May consider another 1-2 bolus dose of fentanyl q 2hourly.
3. If the patient was on opioids or had multiple hospital admissions previously and received opioids, consider NSAIDs (IV Ketorolac – use with caution, can cause AKI) + Opioid (Morphine if already used and had no allergy in past)
4. If on opioids, watch for sedation and subsequent respiratory depression.
5. If on NSAIDs/Acetaminophen, send investigations to make sure kidney and liver functions are normal.

It is important to check for the contraindication of NSAIDs and Morphine during the process of evaluation.

6. If patient has absolute and relative contraindication to opioids and has severe pain as per pain scoring may consider ketamine upfront
7. At discharge, patient should be given discharge card with detailed description of analgesics and dosage of analgesics that child required during the hospital stay, this helps to tackle the next event effectively and also helps in tailoring analgesia to the child.

Drugs and Dosages:

1. Acetaminophen: 10–15 mg/kg q4h, with a maximum dosage of 65 mg/kg/day
2. Ibuprofen: 10 mg/kg q6–8h, with a maximum dosage of 40 mg/kg/day
3. Naproxen: 5 mg/kg q12h, with a maximum dosage of 1 g/day
4. Ketorolac: initial IV loading dose of 1.0 mg/kg, then 0.5 mg/kg q6h to a maximum of 2 mg/kg/day; PO 10mg q4–6h, to a maximum of 40 mg/day
5. Morphine: 0.1–0.15 mg/kg/dose IV (dose limit = 7.5mg). Repeat in 60min if inadequate relief.
6. Morphine sulfate: start at 0.04 mg/kg/h; titrate to relief q8h by increments of 0.02 mg/kg/h, to a maximum of 0.1 mg/kg/h
7. Fentanyl: Bolus doses: Young infant; 1-4 mcg/kg/dose q2-4 hrly .
Older infant and child: 1-2 mcg/kg/dose q30-60mins
Continuous infusion: 1-3mcg/kg/hr.
8. Ketamine: 0.1 to 0.3 mg/kg bolus dosing every 4 hourly
0.1-0.3 mg/kg/hour with a maximum of 1 mg/kg per hour infusion can be given for 48 hours.

FLACC Score			
CATEGORY	0 POINTS	1 POINT	2 POINTS
Face	Disinterested	Occasional grimace, withdrawn	Frequent frown, clenched jaw
Legs	No position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up
Activity	Normal position	Squirming, tense	Arched, rigid, or jerking
Cry	No crying	Moans or whimpers	Constant crying, screams or sobs
Consolability	Content, relaxed	Distractible	Inconsolable

SCORES ADD UP IN RANGE FROM 0-10

Visual Analogue Scale

Choose a Number from 0 to 10 That Best Describes Your Pain

No Pain Distressing Pain Unbearable Pain

0 1 2 3 4 5 6 7 8 9 10

ASK PATIENTS ABOUT THEIR PAIN
INTENSITY—LOCATION—ONSET—DURATION—VARIATION—QUALITY

"Faces" Pain Rating Scale

0 NO HURT 1 HURTS LITTLE BIT 2 HURTS LITTLE MORE 3 HURTS EVEN MORE 4 HURTS WHOLE LOT 5 HURTS WORST

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