

OUTPATIENT MANAGEMENT OF FEVER (T ≥ 38.3°C) IN A CHILD WITH SICKLE CELL DISEASE (Dec 2008)

1. Identification and rapid triage on arrival. Place immediately into exam room. Blood culture should be drawn and parenteral antibiotics should be administered within 30 minutes of arrival.
2. Brief history and physical exam with emphasis on:
 - vital signs with BP, peripheral perfusion, degree of pallor, and pulse ox (compare with patient's baseline)
 - cardiopulmonary status -- Use supplemental O₂ for pulse ox < baseline or <92% and/or signs of respiratory distress.
 - evidence of systemic or localized infection
 - spleen size (compare with baseline exam)
 - neurologic exam
3. Laboratory:
 - Stat CBC, diff, platelet, retic, and blood culture (and follow immediately with IV antibiotic).
 - Consider CRP if osteomyelitis is suspected, hepatic panel &/or amylase, lipase for upper abdominal pain/marked icterus.
 - Type, screen, and crossmatch for extreme pallor, respiratory or neurologic symptoms, or acute splenic enlargement. Request leukocyte-depleted (and, if available, C, E, Kell-compatible minor antigen phenotype) and sickle -ve freshest available RBCs. In an emergent situation, and in absence of alloantibodies, urgent transfusion should not be delayed by search for minor-antigen matched units.
 - Consider UA and urine culture, especially without other focus of infection. CSF or other cultures if clinically indicated.
4. CXR and continuous or frequent pulse ox, particularly if:
 - pulse ox less than patient's baseline (the etiology of a supplemental O₂ requirement should be investigated)
 - Consider CXR in children < 2 yrs old, or with respiratory symptoms, or with chest/shoulder/upper abdominal pain.
5. Parenteral Antibiotic:
 - Prompt administration of ceftriaxone 75 mg/kg IV (2 gm max single dose) through IV access used for phlebotomy. Use IM route (with lidocaine) if venous access delayed.
 - For patients with known or suspected cephalosporin allergy, substitute Clindamycin 10 mg/kg IV q 6 hr (max dose 4800 mg per day). Other choices include quinolones or meropenem 20 mg/kg IV (1 gm max single dose).
 - For severe illness (e.g., altered mental status, suspected CNS infection, poor perfusion, and/or hypotension), add vancomycin 15-20 mg/kg IV (1 gm max single dose) and use higher dose of ceftriaxone (100 mg/kg, 2 gm max single dose) or meropenem (40 mg/kg, 2 gm max single dose). If meningitis is suspected in a child has allergy to ceftriaxone, meropenem should be considered instead of ceftriaxone.
 - Parenteral antibiotics should be given immediately after blood culture drawn, before other procedures such as CXR, etc.
 - The presence of a focus of infection (e.g. otitis) does not alter the urgency of giving parenteral antibiotics.
6. Monitor closely for hypotension and shock. NS bolus 10-20 cc/kg IV for dehydration, hypotension, or poor perfusion. For well hydrated patients with normal BP and perfusion, D₅ ½NS @ 1½ x maintenance (@ maint. if acute chest suspected).
7. Acetaminophen 10-15 mg/kg po (if not given in the last 4 hr) and/or ibuprofen 10 mg/kg po (if not given last 6 hr). Avoid ibuprofen if contraindication present (i.e. gastritis, ulcer disease, coagulopathy, dehydration, or renal impairment).
8. Review patient's past history and baseline values for hemoglobin, platelet, retic, spleen size, and pulse ox.
9. Contact on-call pediatric hematologist to discuss management and disposition.
 - a) Admission or 23 hour observation should be strongly considered if one or more of the following criteria are present:
 - Age < 1 year with HbSS, Sβ⁰-thalassemia, or newborn screening results with hemoglobins FS, not yet confirmed
 - History of previous episodes of bacteremia or sepsis
 - T>40°C, WBC>30,000/mm³ or <5,000/mm³, Hgb< 5 or ≥20% below baseline and/or platelet count <100,000/mm³
 - Signs of systemic toxicity, especially any hypotension, poor perfusion, or unexplained tachycardia
 - Patient who received clindamycin or meropenem or vancomycin
 - Infiltrate on CXR (see Acute Chest Syndrome Guidelines -ACS) or strong suspicion of ACS (e.g. O₂ requirement).
 - Evidence of other acute complications including severe pain, aplastic crisis, splenic sequestration, acute chest syndrome, stroke, or priapism (see other Clinical Guidelines)
 - Concerns about compliance / follow-up
 - b) Outpatient management for patients who are not admitted:

Observe with repeat vital signs, BP, and clinical assessment at least 3 hr post ceftriaxone. If non-toxic and clinically stable with reliable family and hematologist approval, discharge with a specific plan for outpatient FU. Minimum follow-up includes phone contact the next day. Repeat exam and 2nd dose of ceftriaxone (with/without repeat CBC and reticulocyte count) 24 hr later is advisable, (for clinic appt please call x 88239 or 392 5633).

These guidelines do not indicate an exclusive course of treatment or serve as a standard of care. Variations based on a physician's best medical judgement may be appropriate in individual cases.