Bloody Diarrhea Management

Children < 18 years presenting with bloody diarrhea (see exclusion criteria)[a]

Complete thorough physical exam including skin exam for pallor, petechiae or bruising and visual rectal exam to evaluate for anatomic sources of bleeding

Place peripheral IV

Obtain CBC with diff, CMP, LDH, urinalysis with microscopy, GI PCR[b]

Obtain Type and Screen if concern for anemia requiring blood transfusion

Give 10-20 ml/kg NS bolus[c]

Labs concerning for Hemolytic Uremic Syndrome (HUS)[d]

Yes → Admit to inpatient pediatric service vs PICU

- Reevaluate perfusion and repeat 10-20 ml/kg NS bolus if needed
- Initiate hyperhydration with D5NS at 1.5x maintenance rate

No → **HUS/Shiga Toxin Producing E.coli (STEC) Risk Factors[e]**

Yes → Admit to inpatient pediatric service vs PICU

No → **Meeting Discharge Criteria[f]**

No → Admit to inpatient pediatric service vs PICU

Yes → Discharge

- Encourage oral fluid intake
- Instruct family to follow up with PCP or Urgent Care/ED within 24 hours for reevaluation and repeat labs (CBC with diff, BUN/Cr)
- Discuss ED return precautions[g]
- ***If GI PCR becomes +STEC after discharge, contact family for direct admission to pediatric floor, or return to ED if inpatient bed is unavailable***

^Consult pediatric nephrology to discuss at any point if questions

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Footnotes:

a. Exclusion criteria: infants < 4 months of age, prior episode of HUS or atypical HUS, known or suspected malignancy, known inflammatory bowel disease, known renal disease, presentations including acute neurologic symptoms, concern for intussusception, hemodynamic instability or concern for hemorrhagic shock, severe sepsis and/or sepsit shock
b. If hematochezia is in question, obtain fecal hemoccult test.
c. Consider giving a smaller weight-based IVF bolus or deferring IVF if concern for anemia requiring transfusion.
d. Any of the following lab findings concerning for HUS:
    i. Hemolytic anemia (Hgb < 10 g/dL and/or 3+ schistocytes)
    ii. Thrombocytopenia (platelets < 150k)
    iii. Acute kidney injury (elevated BUN/Cr for age, or increase in Cr by 50% or 0.2 mg/dL or more from previous baseline)
    iv. >5% decrease in platelet count since onset of symptoms
    v. Rising BUN/Cr since onset of symptoms
    vi. Hematuria or proteinuria
    vii. Elevated LDH
    viii. Hypoalbuminemia < 3.5 g/dL
e. Any of the following HUS/STEC risk factors:
    i. History of contact with farm animals, consumption of unpasteurized dairy, contact with confirmed STEC case, antibiotic or antimotility agent use during illness, frequent NSAID use during illness
    ii. Severe/frequent bloody diarrhea and/or diarrhea initially nonbloody and became bloody after 1-3 days
    iii. Severe abdominal pain
    iv. Inability to tolerate adequate oral fluids
    v. Evidence of dehydration including decreased urine output
    vi. Family/ social concerns regarding ability to recognize signs of deterioration and comply with strict outpatient follow-up, or inability to arrange PCP/UC/ED follow-up within 24 hrs for clinical assessment and repeat labs
    vii. Presentation within 7 days from onset of symptoms if GI PCR results +STEC (either O157 or non-O157)
f. Discharge criteria:
    i. Clinically hydrated with normal vital signs
    ii. Pain adequately controlled
    iii. Tolerating adequate oral fluids
    iv. Family is comfortable with discharge home
    v. Family understands, agrees to, and has adequate transportation to comply with discharge follow up instructions
g. Utilize Peds ED Bloody Diarrhea discharge instructions, which include ED Return Precautions:
    i. New bleeding, bruising or petechial rash
    ii. Severe abdominal pain
    iii. Unusual/severe headache
    iv. Atypical irritability
    v. Inability to tolerate adequate oral fluids
    vi. No urine output for 12 hours
    vii. Edema

References:

1. Greater Glasgow and Clyde Paediatric Guideline: Management and investigation of bloody diarrhea and haemolytic uremic syndrome, 2019.
2. Seattle Children's Hospital Clinical Practice Guideline: HUS Risk – Bloody Diarrhea v2.0, 2024.
3. McKee RS et al, "Clinical and Laboratory Predictors of Shiga Toxin-Producing Escherichia coli Infection in Children With Bloody Diarrhea." J Pediatric Infect Dis Soc. 2018 Aug 17;7(3):e116-e122.