Aim: To standardize treatment for children with CDI

If clinically feasible, discontinue non-CDI antibiotics and proton pump inhibitors. Assess need for fluid and electrolyte support. Do not use antiperistaltic agents. (see NOTE 1)

Non-Severe CDI
- Is the patient pregnant/breastfeeding or at high risk for recurrence/treatment failure? (see NOTE 2)
  - No
    - Vancomycin PO 10 mg/kg Q6H (max: 125 mg/dose)
      - Duration: 10 days
    - Metronidazole PO 10 mg/kg Q8H (max: 500 mg/dose)
      - OR
    - Vancomycin PO 10 mg/kg Q6H (max: 125 mg/dose)
      - Duration: 10 days
  - Yes

Severe CDI
- Vancomycin PO plus PR
  - 10 mg/kg Q6H (max: 500 mg/dose)
  - AND
  - Metronidazole IV
    - 10 mg/kg Q8H (max: 500 mg/dose)
    - Duration: 10 days
    - Note: Antibiotic therapy for CDI should be started empirically for situations where a substantial delay in laboratory confirmation is expected, or for fulminant CDI

Fulminant CDI
- Consult ID, GI, and Surgery (see NOTE 4)

Recurrent CDI
- First Recurrence
  - Vancomycin PO 10 mg/kg Q6H (max: 125 mg/dose)
    - Duration: 10 days
  - Repeat treatment course from initial CDI
    - Duration: 10 days

Severe CDI
- Consult ID

Non-Severe CDI
- First Recurrence
  - Second/Subsequent Recurrence
  - Consult ID

For information about rectal (PR) vancomycin see NOTE 3
For assessment of clinical response see NOTE 5

Disclaimer: This guideline is designed for general use with most patients; each clinician should use his or her own independent judgment to meet the needs of each individual patient. This guideline is not a substitute for professional medical advice, diagnosis or treatment.
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DEFINITIONS

There are no validated criteria for disease severity in children. The definitions below are based on adult criteria.

**Non-Severe CDI:** Diarrhea ≥ 3 times per day without symptoms defined under severe CDI

**Severe CDI:** Diarrhea ≥ 3 times per day AND at least one of the following:
- Leukocytosis or leukopenia (WBC > 15,000 or < 5,000) not otherwise explained (e.g. chemotherapy-induced leukopenia)
- Elevated age adjusted creatinine or worsening renal function

**Fulminant CDI:** Diarrhea ≥ 3 times per day AND at least one of the following:
- Hypotension or shock
- Ileus or toxic megacolon
- Pseudomembranous colitis by endoscopy

**Recurrent CDI:** Definition of recurrent CDI specifies an episode of symptom onset and positive C. difficile Toxin PCR following another episode with positive C. difficile Toxin PCR in the previous 2–8 weeks. Currently, there is no universally accepted clinical definition of recurrent CDI. For clinical purposes, based upon expert opinion, an episode of CDI occurring within 6 months after completion of treatment for a prior CDI may be considered a recurrent CDI episode. If there is uncertainty about whether a CDI event is initial or recurrent, discussion with an Infectious Disease specialist is encouraged.

NOTE 1:

Patients with mild CDI may have spontaneous resolution of CDI after discontinuing the inciting antibiotic(s). Virtually all antibiotics have been associated with CDI. Certain classes (3rd and 4th generation cephalosporins, fluoroquinolones, carbapenems, and clindamycin) have been associated with higher risk for CDI. Consider holding CDI treatment for 48–72 hours. If CDI symptoms have not resolved at that time, initiate treatment for CDI.

NOTE 2:

Populations at high risk for recurrent CDI or treatment failure include: patients with cancer, patients with IBD, patients who are immunosuppressed, patients who are G/J tube dependent, solid organ transplant patients, stem cell transplant patients, and patients with Hirschsprung's disease.

NOTE 3:

Rectal administration of 10 mg/kg vancomycin (standard concentration is 500 mg/100 mL normal saline) is indicated for patients with fulminant disease. Since rectal manipulation in hematology/oncology patients is generally discouraged, the decision to use rectal vancomycin in these patients will require weighing risks vs. benefits.

NOTE 4:

In patients with fulminant CDI, a rising WBC count (≥ 25,000) or a rising lactate level (≥ 45 mg/dL) is associated with high mortality. Patients should be closely monitored, with early specialist surgical input.

NOTE 5:

Clinical response is usually evident within the first 3 days of treatment and includes improvement in abdominal pain, reduced stool frequency, decreasing WBC count if elevated, and resolution of fever if present. If patient symptoms are worsening or have not improved by day 5 or 6 of treatment, a change of therapy is indicated.

ADDITIONAL RESOURCES

Antibiotic recommendations for treatment of CDI in adults - see the subsection on CDI in the following guideline: https://starnet.childrenshc.org/References/CDS/adult-sepsis-antibiotic-recommendations.pdf

Guidance on CDI testing

Prevention of CDI transmission, https://starnet.childrenshc.org/References/Policy/1200/1231.00-enteric-(transmission-based)-precautions.pdf


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**REFERENCES**