ED/INPATIENT GUIDELINE

CLOSTRIDIOIDES DIFFICILE INFECTION (CDI) TREATMENT GUIDELINE

(Age < 18 years old)

Children's MINNESOTA

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**)

Initial CDI

Non-Severe CDI

Is the patient pregnant/ breastfeeding or at high risk for recurrence/ treatment failure? (see **NOTE 2**)

Yes

Vancomycin PO
10 mg/kg Q6H
(max: 125 mg/dose)
Duration: 10 days

No

Metronidazole PO
10 mg/kg Q8H
(max: 500 mg/dose)
OR
Vancomycin PO
10 mg/kg Q6H
(max: 125 mg/dose)
Duration: 10 days

Severe CDI

Vancomycin PO
10 mg/kg Q6H
(max: 125 mg/dose)
Duration: 10 days

Fulminant CDI

Consult ID, GI, and Surgery
(see **NOTE 4**)

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

Recurrent CDI

Fulminant CDI

Consult ID, GI, and Surgery
(see **NOTE 4**)

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

Severe CDI

First Recurrence

Vancomycin PO
10 mg/kg Q6H
(max: 125 mg/dose)
Duration: 10 days

Non-Severe CDI

First Recurrence

Repeat treatment course from initial CDI
Duration: 10 days

Second/Subsequent Recurrence

Consult ID
Vancomycin
taper/pulse

For information about rectal (PR) vancomycin see **NOTE 3**

For assessment of clinical response see **NOTE 5**

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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: Surveillance 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.

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

Patient/family education on CDI, https://www.cdc.gov/hai/pdfs/cdiff/Cdiff tagged-BW.pdf

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.

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