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PREAMBLE

Oral vancomycin can be used as alternative to metronidazole for the treatment of Clostridium difficile-associated diarrhea and colitis. However, metronidazole is still first line therapy. Oral vancomycin is not recommended as first-line treatment because it has equivalent efficacy to metronidazole, is more expensive, and contributes to the emergence of vancomycin-resistant Enterococci[1].

Once a patient tests positive for stool Clostridium difficile toxin during a current episode, **do NOT repeat** stool tests because they do not affect subsequent medical management or infection control precautions. The only indication for repeat stool testing is to confirm that relapsing diarrhea is due to Clostridium difficle[1]. Antimotility drugs (e.g. Imodium) are contraindicated.

NOTE

Oral Vancomycin is NOT effective by the oral route for the treatment of systemic infections due to the drugs' poor oral absorption[2].

PROTOCOL

Vancomycin is approved for use under the following conditions:

Initial Treatment

- **Metronidazole Treatment Failure (mild/moderate CDAD) – for initial occurrence**

For treatment at a dose of 125 mg po qid for 10 days (14 days if immunocompromised), when first-line treatment with metronidazole 500 mg po tid or 250mg po QID for 10 days (14 days if immunocompromised) has failed.

*Note: Patients on metronidazole should not be deemed treatment failures until at least **6 days** of therapy have been given. The mean time to resolution of diarrhea is 2 to 4 days[1].*

- **Severe CDAD – for initial occurrence[3]**

Initial treatment with vancomycin is recommended if the patient has a severe case of CDAD. Parameters of severe disease are not clearly defined in literature, but common markers include:

- *White blood cell count > 15,000 cells/uL (indicating leukocytosis)*
- *Serum creatinine (1.5x increase from baseline, indicating dehydration or inadequate renal perfusion)*

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- *Signs of symptoms of megacolon (distended abdomen with decreased bowel motility)*

Patients exhibiting these signs or other clinical indicators of more severe CDAD should initiate treatment with vancomycin 125mg po QID for 10-14 days.

Recurrent Treatment

- **Relapse (first occurrence)**

Historically, 6%-25% of patients treated for CDAD experience at least one recurring episode. Initial recurrence of CDAD, if antibiotics are required, should be treated with a repeat course of the initial treatment (either metronidazole or vancomycin)

Note: Relapse is defined as recurrence of watery stools and positive stool toxin test within 6 weeks after previous successful treatment with either metronidazole or vancomycin. Successful treatment means the patient was asymptomatic at least 4 days after completing antibiotic treatment. ***Recurrence does not equal Metronidazole failure – a retrial of Metronidazole should be used if treatment for initial occurrence was effective***

- **Relapse (second and subsequent occurrences)**

Metronidazole should not be used beyond the first recurrence or for long term therapy due to risk of neurotoxicity[3]. Treatment of a second recurrence of CDAD (any severity) is best accomplished with a tapering and/or pulsed regimen of oral vancomycin. An example of a tapering and/or pulsed regimen of oral vancomycin is as follows:

- usual dosage: oral vancomycin 125 mg 4 times daily for 10 to 14 days
- taper: oral vancomycin 125 mg twice daily for 1 week, then 125 mg once daily for 1 week, and then 125 mg every 2 or 3 days for 2 to 8 weeks

1. Adapted from Calgary Health Region Acute Care Infection & Control Program – Management of Adult Patients with. C. difficile-Associated Diarrhea (CDAD), September 3, 2003
2. Cohen M. ISMP Medication Error Report Analysis: Oral Vancomycin Does Not Treat Systemic Infections. Hospital Pharmacy.2003; 38(8): 726-728,808.
3. Cohen SH , Gerding DN , Johnson S , et al: Clinical practice guidelines for Clostridium difficile infection in adults: 2010 update by the society for healthcare epidemiology of America (SHEA) and the infectious diseases society of America (IDSA). Infect Control Hosp Epidemiol 2010; 31(5):431-455.