

ANTIBIOTIC ASSOCIATED DIARRHOEA (*Clostridium difficile*)

KEY POINTS

C. difficile is common in the hospital environment

Patients are likely to acquire the organism during their hospital stay

Some strains are more likely to be associated with disease than others and these may become endemic in a ward

Disease associated with this organism in the large bowel is generally precipitated by antibiotic use

Whereas all antibiotics can cause diarrhoea, some are more likely than others to precipitate pseudomembranous colitis, which is a rare but serious infection with a high mortality

All patients with diarrhoea should be nursed in Source Isolation (see policy for Source Isolation)

INTRODUCTION

Diarrhoea is a common side-effect of broad-spectrum antibiotic therapy. It usually resolves when the antibiotics are stopped.

A patient may already be colonised with *Clostridium difficile* in the gut on admission to hospital or, more likely, acquires one or more new strains of the bacterium from the hospital environment. Transmission of gut-associated pathogens is made much easier by shedding large numbers of bacteria in diarrhoeal stools. The organism produces spores resistant to simple cleaning methods and survives well in the hospital environment. Outbreaks may easily occur, especially in geriatric wards. *C. difficile* is associated with especially serious forms of post-antibiotic diarrhoea which may be life threatening. Patients may get fever and stomach cramps and the diarrhoea itself can cause severe dehydration very rapidly in the elderly.

Toxins produced by *C. difficile* can be detected in the stool. It is not worth culturing the faeces for *C. difficile* because many strains do not produce toxin and there is no reason to believe that these strains are implicated in disease.

The toxins cause the most severe manifestation of this infection: pseudomembranous colitis, a disease best diagnosed by sigmoidoscopy and biopsy, or by special X-ray investigation. It is very rare. The finding of *C. difficile* toxin in the stools **does not mean** that the patient has pseudomembranous colitis.

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MANAGEMENT

- Source isolate **all patients** with diarrhoea.
- Evaluate the patient as to whether diarrhoea might be antibiotic associated. It may even start a few weeks after stopping antibiotics.
- Stop the antibiotic if it is still being prescribed.
- Start resuscitation with fluid and electrolyte replacement.
- Consider pursuing the **diagnosis** of pseudomembranous colitis.
- Consider specific treatment if stopping the antibiotics has no effect or if the patient is very unwell
- Use oral metronidazole as first line therapy for antibiotic associated diarrhoea.
- Use oral vancomycin as second-line therapy. Note that oral vancomycin is considered to predispose to colonisation with vancomycin-resistant enterococci).
- Vancomycin is probably the drug of choice for **proven** pseudomembranous colitis. The patient may need surgery.
- Report cases to Infection Control Team- if there is an outbreak (see policy for Outbreak Management) ward closure and thoroughly cleaning should be considered.

FOLLOW UP

- 20-30% of patients treated apparently successfully will relapse and require further treatment
- There is **no** need to send repeat stools for examination for *C. difficile* toxins

PREVENTION

- Scrupulous hygiene relating to patient and the environment
- Isolate patients with diarrhoea
- Reduce the usage of antibiotics, especially cephalosporins

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