series of imaging testing: CT scan in Clostridium difficile colitis, endoscopy - it can deliver a rapid diagnosis if pseudomembranes are visualized. Nevertheless, the use of endoscopy is rarely recommended in the setting of colitis, because of the high risk of perforation (10).

Antibiotic therapy

First of all, when CDI is suspected, all unnecessary antibiotic agents will be discontinued. In mild-to-moderate cases, it is believed that oral metronidazole 500 mg three times per day for 10 days may be a successful treatment. Although metronidazole may be associated with more frequent side effects, in patients with an initial episode of non-severe CDI it is preferred, when access to vancomycin or fidaxomicin is limited (11-12). However, recent data have suggested an overall superiority of vancomycin to metronidazole for treatment of patients with CDI. Oral vancomycin 125mg four times a day for 10 days is recommended as first choice also for moderate cases (9).

In patients in whom oral antibiotics cannot be administrated, it is not recommended the intravenous administration. Intravenous vancomycin has no effect on CDI since the antibiotic is not excreted into the colon. A good alternative is vancomycin enema, especially for patients who cannot tolerate oral preparation - patients with ileus (12). In surgical patients with Hartmann resection, ileostomy, trans-stoma vancomycin may also be effective.

A valid alternative to vancomycin may be fidaxomicin administrated 200mg twice a day for a period of 10 days. Recent data showed that fidaxomicin is useful for patients who are considered at high risk of recurrence.

Patients with severe C. difficile infection, fulminant colitis, that progresses to systemic toxicity, and patients with organ failure require early surgical intervention. Nevertheless, emergency surgery for fulminant colitis will increase the mortality; bad prognostic factors are prolonged preoperative intubation, acute renal failure, multiple organ failure (13). In these cases, before surgery, patients with fulminant colitis should be treated with high doses of vancomycin, oral and enema, in combination with intravenous metronidazole.

An effective option for patients with multiple recurrences of CDI with failure of antibiotic treatment, may be the fecal microbiota transplant (FMT). Although fecal microbiota transplant has great success rates with long term durability, some disadvantages still exist (14): the laborious manipulation of feces and the enteral administration, the big costs of preparing the samples, making this treatment likely unattractive for both patients and physicians. The encapsulated preparation of FMT is a less invasive and also improved concept, that recently has had success.

CONCLUSIONS

Clostridium difficile infection has become a global public challenge, do to the increase of incidence worldwide, esspecially among surgical patients. Therefore, a better management of the disease by optimization of the perioperative treatment, postoperative care, immediate diagnosis of CDI and implementation of infection prevention and control strategies are of greatest importance in controlling this challenging infection.

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