

中文題目：困難梭狀芽孢桿菌感染的不典型臨床表現影響病人脫離呼吸器

英文題目：Atypical presentations of *Clostridium difficile* infection preclude weaning from prolonged mechanical ventilation

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## **Introduction**

*Clostridium difficile* infection (CDI) is a common healthcare associated infection (HCAI). The typical presentation of CDI is watery diarrhea many times per day, usually occurring at 3-7 days after antibiotic exposure. CDI may present without diarrhea or even with constipation. Without early recognition of this infection, this disease will increase hospital length of stay, and may progress rapidly to life-threatening toxic megacolon or colonic perforation requiring emergent colectomy. Despite this, the mortality rate may more than 40%.

## **Case Presentation**

An 82-year-old male was referred to our hospital for difficult weaning with ventilator dependency. He suffered from choking aspiration complicated with pneumonia and hypoxic respiratory failure. His abdominal distension began when he was in the referral hospital. Without diarrhea, he passed loose stool 4 to 5 times every day. He usually complained lower abdominal discomfort with vague pain or tenderness. Distended abdomen made him short of breath and impeded following weaning process.

Initial physical examination revealed metallic bowel sound and abdominal distension with diffuse tympanic percussion. KUB showed severe intestine ileus. Because of delayed gastric emptying secondary to ileus, we has tried delaying or stopping enteral feeding sometimes, or administered prokinetic agents to promote bowel motility. The effect was minimal. In addition, distension of bowel resulted in elevation of diaphragm, leading to atelectasis of bilateral lower lungs, which increased mean airway pressure and precluded weaning process.

He had ever received a 7-day course of amoxicillin/clavanate 1 gram twice daily for ventilator associated tracheo-bronchitis four weeks before abdomen ileus progressed. He didn't present watery diarrhea, but just abdomen gaseous distension and hypoactive metallic bowel sound. A complete workup on gastrointestinal dysfunction was initiated. Routine stool analysis and bacterial culture were negative finding. Colonoscopy also showed negative finding without colitis or tumor growth. Prokinetic agents had also been used for symptomatic relief on paralytic ileus. However, KUB still showed bowel gas retention with progressive dilatation in colon diameter. We then arbitrarily ordered a stool study for *C. difficile*, although there was no typical presentation. To our surprise, the enzyme immune assay for *C. difficile* toxin was positive. He was prescribed one-week Metronidazole treatment. His abdominal distension improved and stool became formed 2 days after treatment. Patient was able to sit on chair and to accept more physical rehabilitation. Airway symptoms also improved quickly. He was successfully weaned off ventilator 3 weeks after completing treatment. However, about one month after discharge, he began experiencing poor appetite and abdominal distension. Stool study for *C. difficile* toxin assay was positive again. Oral Vancomycin was then used in a dose of 125 mg four times daily. His symptoms improved quickly.

## **Discussion**

CDI contributes approximately 5% of HCAI. Ratio of colonization in hospitalized patient may up to 10% compared with patients in the community. Most cases of CDI present during or shortly after antimicrobial use. However, it is important to be aware that disease onset can be delayed for 2 or, even 3 months, as these late presentations can lead to misdiagnosis. Symptoms of CDI may be

predominant watery diarrhea. However, some patients would atypically present with nausea, vomiting, or severe ileus. Recurrence typically develops at 1 to 2 weeks after stopping Metronidazole or Vancomycin but can be delayed for up to 12 weeks. Recurrence rates are about 20%. Our case demonstrates an atypical presentation of *C. difficile* infection with recurrence. In conclusion, clinicians should have a high index of suspicion for the potential CDI in patients with any abdomen discomforts, especially those with a history of antibiotic exposure and long-term hospitalization.