

# Analysis of patients with *Clostridioides difficile* infection in a hospital

Yi-Ching Huang

Department of Infectious Diseases, Jen-Ai Hospital, Taichung, Taiwan

## Background

*Clostridioides difficile* infection (CDI), a common healthcare-associated infection, associated with antimicrobial use, can cause mortality and morbidity in older hospitalized patients. The clinical manifestations range from asymptomatic carriage to fulminant disease. Globally, the incidence of CDI in the hospitals was 5.0 per 10,000 patient-days (95% CI 3.96–6.15) and the mortality rate for CDI was 12.1%.<sup>1</sup> In Taiwan, the incidence of CDI was 1.1–7.3 per 10,000 patient-days and the overall in-hospital mortality was 20–26.2 %. The recurrence rate of CDI in medical centers was 7.2–10.9 % in Taiwan.<sup>2</sup> The recommended oral antibiotic treatment for CDI included fidaxomicin, vancomycin and metronidazole.<sup>3</sup>

## Methods

The data was from the records of medical charts and microbiology laboratory at Jen-Ai Hospital, Taichung, a 600-bed regional teaching hospital in central Taiwan. This study enrolled patients with the presence of diarrhea  $\geq 3$  loose stools in 1 day and at least one *Clostridioides difficile* toxin gene testing from 1 January 2023 to 31 December 2024. The following information was collected: age, gender, chronic diseases, antibiotic exposure, length of hospital stay, the use of proton pump inhibitors, treatment and outcomes.

## Results

Totally 200 patients with compatible clinical features were enrolled, and 29 patients had positive result of *Clostridioides difficile* toxin gene testing. The average age was 72 years old (80 % were over 65). There were no gender differences. The most common comorbidities included diabetes mellitus (37.9 %), end-stage renal disease (13.8 %), cancer (17.2 %). The average period from hospital admission to diagnosis of CDI was 13 days. More than half of the patients received oral vancomycin (three patients had recurrent CDI), and the others received oral metronidazole or no treatment.

## Conclusion

In this retrospective study, these patients with CDI were mostly elderly, with chronic diseases, prior use of antibiotics or recent hospitalization. Most patients had nonsevere CDI and good response to treatment. The recurrence rate was 10.3 %.

## Reference

1. Akorful RAA, Odoom A, Awere-Duodu A, Donkor ES. The Global Burden of *Clostridioides difficile* Infections, 2016–2024: A Systematic Review and Meta-Analysis. *Infect Dis Rep*. 2025;17(2):31.
2. Wu KS, Syue LS, Cheng A, Yen TY, Chen HM, *et al*. Recommendations and guidelines for the treatment of *Clostridioides difficile* infection in Taiwan. *J Microbiol Immunol Infect*. 2020;53(2):191–208.
3. Mehta N, Kraft C, Johnson S. Advances in the medical treatment of *Clostridioides difficile* infection. *Infect Dis Clin North Am*. 2025;S0891-5520(25)00068-6.