Recurrent Clostridioides difficile infection in Canadian acute-care hospitals, 2015-2021

1. Background
Recurrent Clostridioides difficile infection (CDI) presents unique treatment challenges as up to 25% of all cases may result in a relapse, with more than half of these patients experiencing multiple recurrences.

In this study, we describe the epidemiology and molecular characteristics of CDI in hospitals participating in Canadian Nosocomial Infection Surveillance Program (CNISP) from 2015 to 2021.

2. Methods
- We included 350 CDI cases from 4,023 primary CDI cases collected from 67 CNISP hospitals whose primary CDI occurred between March 1 to April 30 from 2015-2021.
- A diffuse infection was performed for primary cases using ethanol shock treatment, antiretroviral susceptibility using E-test, and molecular characterization using cotype gel-based electrophoresis ribotyping.
- We compared epidemiological characteristics between recurrent and non-recurrent CDI with two-tailed differences considered significant at p=0.05.

3. Results
- Of 4,023 primary CDI cases included in this analysis, CDI was reported in 350 (7.8%) cases.
- The CDI rate of 7.8% observed in CNISP hospitals was lower than previously published data.
- Patients with CDI were more likely to remain in hospital 30 days post primary infection.

4. Laboratory results
- RTP27: 15.3% (p=0.001) was significantly more common among CDI cases.

5. Conclusions
- Recommendations

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