
Microbiology

Abstract citation ID: jjad212.1369

P1239

Characterization of *Clostridioides* strains and antibiotic resistance profile in Inflammatory Bowel Disease patients with *Clostridioides* infection

R. Oliveira¹, H. Tavares de Sousa¹, J. Roseira¹

¹Algarve University Hospital Centre, Gastroenterology Department, Portimão, Portugal

Background: There is an increasing incidence of community-acquired *Clostridioides difficile* infection (CDI), particularly in IBD. Due to a suspected community outbreak in mid-2023, we aimed to investigate the microbiological and antibiotic resistance profile of CDI in an IBD cohort, employing blind central reading, in order to better understand its epidemiology.

Methods: This was a prospective study of a University Tertiary Hospital in collaboration with the Infection Control Unit and a central laboratory at the forefront of Infectious Diseases investigation in Portugal (Instituto Ricardo Jorge [IRJ]). Faecal samples from all IBD-related CDI from Apr to Oct 2023, were analysed at IRJ, including isolation and identification of *C. difficile* strains and testing for antimicrobial susceptibility. Infectious diseases investigators were blinded to patients' data.

Results: Eleven patients with IBD (median 42 years, 60.0% female) had at least one episode of CDI, comprising 15 IBD-related CDI cases, which represents 26.3% of all CDI cases in this 6-month period. Moreover, this compares to only 14 cases of IBD-related CDI in the previous four years combined. All patients had UC (66.7% extensive), with a median diagnosis of 11 years. All cases were community-acquired, diagnosed in the context of acute worsening of UC symptoms; 40% required hospitalization. Remarkably, only 2 patients had recent antibiotic therapy, while 3 had a recent visit to the emergency department. No predominant ribotype (RT) was recognised: RT 002/2, RT 017, RT 039, RT 078, RT 106 and RT 839 were identified in similar proportions. There were two new RTs detected, which are under characterization. All isolates were susceptible to vancomycin and metronidazole, but 46.7% were resistant to moxifloxacin, which is higher than ever reported in Portugal. Most cases (n=12) were prescribed vancomycin and followed a taper-and-pulse dosing (n=9). None of the three patients who had a recurrence had received taper-and-pulse dosing. Optimization of UC therapy was performed in all cases, including concomitant immunosuppressive therapy escalation when needed, as recommended. Interestingly, one case, despite having tested positive for *C. difficile*, had a *Clostridioides hathewayi* isolated in the culture instead. To our knowledge, this is the first case of *C. hathewayi* associated diarrhoea resolving upon treatment with vancomycin.

Conclusion: The absence of a predominant ribotype, excluding a community outbreak, demands heightened CDI vigilance in IBD even in absence of traditional risk factors. Alarming moxifloxacin resistance underscores evolving dynamics. A novel *C. hathewayi*-associated diarrhoea case and the emergence of two new ribotypes adds complexity.