In Vitro Activities of Fidaxomycin and Its Metabolite OP-1118 Against Clinical Isolates of Toxin-Positive Clostridioides difficile Cultured from Diarrheal Stool Specimens in Canada: CAN-DIFF 2013

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BACKGROUND
Clinical microbiology laboratories do not routinely culture C. difficile (CD) toxin-positive (TP) stool specimens or perform antimicrobial susceptibility testing (AST) on these isolates. As the epidemiology, susceptibility, and pathogenicity of TP-C. difficile evolves, surveillance for resistance and optimisation of antimicrobials for treatment of disease may be critical. This study assessed the in vitro activities of 6 routinely tested anti-anaerobic agents and the novel, non-antibiotic antimicrobial, fidaxomycin, and its active metabolite, OP-1118, against TP-C. difficile isolates collected in Canada in 2013.

Methods: Isolates of CD (n = 437) were cultured on Clostridioides difficile Nocardia selective (CDN) agar from TP stool specimens. Each isolate’s identity was confirmed by PCR for toxin A and B genes, tandem repeat analysis or a positive antitoxin fluorescence test, and chartreuse fluorescence under UV light. Antimicrobial susceptibility testing was performed using the broth microdilution method (Clinical and Laboratory Standards Institute, 2011). MICs were recorded in µg/ml.

RESULTS
The susceptibility results are shown in Tables 1 and 2. The comparison of the minimum inhibitory concentrations (MICs) of the recently released fidaxomycin and its active metabolite, OP-1118, for 114 toxin-positive CD isolate shows that the MICs were generally lower for fidaxomycin compared with its active metabolite.

REFERENCES