

Recurrent *Clostridium difficile* Infection: Enter Fidaxomicin

Fidaxomicin significantly reduced the recurrence rate in patients infected with non-NAP1/BI/027 strains.

Recurrence of *Clostridium difficile* infection (CDI) is common, whether metronidazole or vancomycin is used as initial therapy. Fidaxomicin, a new macrocyclic antibiotic that has no cross-resistance with other antibiotics, is more active in vitro than vancomycin against clinical *C. difficile* isolates; in a phase II trial, it was associated with good clinical response and a low CDI recurrence rate. Now, in a manufacturer-sponsored, multicenter, double-blind, phase III trial, researchers have compared this agent with oral vancomycin in 629 adults with CDI.

Participants were randomized to receive fidaxomicin (200 mg twice daily) or vancomycin (125 mg 4 times daily) orally for 10 days. The primary endpoint was clinical cure (resolution of diarrhea; no need for additional CDI therapy as of posttreatment day 2). Secondary endpoints included CDI recurrence during the 4-week period after the end of therapy.

The clinical cure rates with fidaxomicin were noninferior to those with vancomycin in both the modified intention-to-treat (MITT) population (88.2% and 85.8%, respectively) and the per-protocol (PP) population (92.1% and 89.8%). Among patients infected with the NAP1/BI/027 strain, the recurrence rates were similar between treatment arms in the two populations. However, among those infected with non-NAP1/BI/027 strains, the recurrence rates differed dramatically between vancomycin and fidaxomicin in both the MITT population (28.1% vs. 10.3%; $P < 0.001$) and the PP population (25.5% vs. 7.8%; $P < 0.001$). The rates of adverse events and serious adverse events were similar between treatment arms.

Comment: On the basis of the findings from this investigation, an editorialist wrote that fidaxomicin appeared to be "an important advance." I hope that this is the case — new, more-effective treatments for CDI are badly needed.

— [Larry M. Baddour, MD](#)

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