Proactive choice of antibiotic may reduce the risk of Clostridioides difficile infection

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Background
CDI is the leading cause of healthcare-associated infections, with an estimated 2.34 cases per 1000 hospital admissions per year. Use of antibiotics such as fluoroquinolones, cephalosporins, and clindamycin is associated with increased risk of CDI. This is of particular concern given the wide use of ceftriaxone and levofloxacin/moxifloxacin (prominent members of these drug classes) in treating community-associated infections. Multiple action plans and initiatives have been introduced to reduce CDI rates, including antibiotic stewardship programs, national surveillance and action plans, improved testing methods, and enhanced infection control. Most initiatives are aimed at secondary prevention; however, a proactive CDI risk assessment may offer objective evidence to defer use of antibiotics associated with a high risk of CDI, such as fluoroquinolones and ceftriaxone in CABP.

Methods
Patients were randomized 1:1 to receive 100 mg intravenous (IV) omadacycline every 12 hours for 7 days and oral levofloxacin/moxifloxacin (prominent members of these drug classes) in treating community-associated infections. The results from this analysis may indicate a lower propensity to induce CDI with omadacycline, compared with moxifloxacin treatment.

Objective
To compare the risk and number of cases of Clostridioides difficile infection (CDI) in patients with community-acquired bacterial pneumonia treated with omadacycline or moxifloxacin. The authors thank all the patients who took part in the OPTIC study.

Results
Omadacycline and moxifloxacin groups included 386 and 388 patients, respectively. Risk of CDI was balanced across treatment groups, with overlapping mean and variance distributions (Figure 1). No cases of CDI were reported in the omadacycline group (p=0.0037) but eight cases of CDI were reported in the moxifloxacin group.

Conclusions
Despite equal risk across the two treatments, no cases of CDI were seen with omadacycline treatment, whereas eight cases occurred in the moxifloxacin group. The results from this analysis may indicate a lower propensity to induce CDI with omadacycline, compared with moxifloxacin treatment.

References

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