Reply to Nguyen et al

TO THE EDITOR—We thank Nguyen and colleagues for their informative letter [1]. We were similarly pleased to learn that earlier this year, the Clinical and Laboratory Standards Institute established interpretive criteria for cefazolin for urinary isolates of Enterobacteriaceae at ≤16 µg/mL [2]. Evaluating data from 43 acute care facilities, with the lowering of cefazolin breakpoints from 8 µg/mL to 2 µg/mL in 2011, we found that there was a 43% decrease in the number of Escherichia coli urinary isolates identified as susceptible to cefazolin [3]. We were concerned that the breakpoint of 2 µg/mL virtually eliminated cefazolin as an empiric option for uncomplicated urinary tract infections (UTIs) and encouraged prescribers to resort to increasingly broad-spectrum agents, in direct conflict with the need to preserve the utility of existing antibiotics. With the establishment of a new breakpoint of 16 µg/mL for cefazolin against urinary isolates of Enterobacteriaceae, we believe that first-generation cephalosporins will once again be considered reasonable treatment options for uncomplicated UTIs.

The decision to establish the cefazolin breakpoint at 2 µg/mL was based on pharmacokinetic studies in patients with bacteremia [4–6]. Because first-generation cephalosporins achieve high urinary concentrations [4], we believe that they would likely remain efficacious for uncomplicated UTIs caused by E. coli even with minimum inhibitory concentrations (MICs) >2 µg/mL. This is supported by clinical data demonstrating comparable clinical outcomes for patients receiving cefazolin vs alternative agents for E. coli UTIs with MICs as high as 16 µg/mL [7–11]. It has been previously shown that susceptibility agreement between cefazolin and cephalaxin is approximately 97%, making cefazolin a reasonable proxy for oral cephalaxin activity [12]. We are optimistic that the increased breakpoint will expand treatment options for uncomplicated UTIs, without compromising patient outcomes.

Because of well-known complications, as well as the inconvenience and added cost of parenteral antibiotics, it is always our preference to exhaust oral antibiotic options before considering treatment courses of parenteral antibiotics for uncomplicated UTIs. We agree with Nguyen and colleagues that it important to reevaluate existing data to inform urinary breakpoints for available oral agents such as ciprofloxacin, trimethoprim-sulfamethoxazole, and amoxicillin-clavulanate. It is imperative that we refine susceptibility reporting to maximize clinicians’ use of available drugs before discounting them as treatment options.

Note

Potential conflicts of interest. All authors: No potential conflicts of interest.

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