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Sir,

We read with great interest the article entitled "Antimicrobial susceptibility testing of *Kingella kingae* with broth microdilution and disk diffusion using EUCAST recommended media" published by Matuschek et al [1]. *Kingella kingae*, is now recognized as the first pathogen causing septic arthritis and osteomyelitis in children between 6 months and 4 years of age in several countries, preceding *Staphylococcus aureus* [2]. Empiric treatment should therefore cover both pathogens and amoxicillin plus clavulanate or second or third generation cephalosporins have been recommended [2, 3]. Moreover, *K. kingae* is not fully susceptible to oxacillin (minimum inhibitory concentration [MIC]: MIC_{50} = 3 mg/L and MIC_{90} = 6 mg/L) [2], which is frequently used as first line treatment in some countries. First generation cephalosporins such as cefazolin are recognized for a long time to cure bone and joint infections due to *S. aureus* and are even recommended in prosthetic joint infection treatment due to methicillin-susceptible *S. aureus* [4]. However, the susceptibility of *K. kingae* to this drug has not been investigated yet, and neither breakpoints were provided in the recent publication of the European Committee on Antimicrobial Susceptibility Testing (EUCAST, Clinical Breakpoint Tables v7.1, March 2017, http://www.eucast.org/) nor MICs distribution by Matuschek et al [1].

Forty clinical *K. kingae* isolates from various geographical locations and representative of the diversity of the species in terms of pathogenicity and genotypes, based on multilocus sequence typing (MLST) analysis [5], were selected for susceptibility testing. The reference type strain ATCC 23330 from Norway was also included. The 40 clinical isolates were from the USA (n=5), Canada (n=5), Spain (n=6), Israel (n=10), Iceland (n=2) and France (n=12). The major sequence type complexes STc-6, 14, 23, 25, 33, and 35 were represented with 11, 8, 5, 6, 3 and 5 strains respectively. Twenty-nine strains were involved in osteo-articular infections, 4 in occult bacteraemia, 3 in endocarditis, 1 in infection of unknown site, and

finally 3 were isolated from healthy carriers. Nine strains produced a penicillinase and were from the USA, Iceland, Israel and France [6]. Cefazolin MICs using E-test method were determined on Mueller-Hinton-F agar (Biomerieux, Marcy-l'-Etoile, France) with an inoculum of McFarland 0.5 (corresponding to 10^8 CFU/ml), as recommended by EUCAST. The reference strains *Escherichia coli* ATCC 25922 and *S. aureus* ATCC 29213 were used as control.

MIC_{50} and MIC_{90} were 0.38 and 0.5 mg/L respectively (range 0.19 to 0.75 mg/L). The nine beta-lactamase-producing *K. kingae* isolates had similar cefazolin MICs compared to their non-producers counterparts (MIC_{50} = 0.50 mg/L [range: 0.25-0.75 mg/L] vs. MIC_{50} = 0.38 mg/L [range: 0.19-0.75 mg/L], respectively, p=0.31 by Mann-Whitney U test). The cefazolin MICs of the reference strains *Escherichia coli* ATCC 25922 and *S. aureus* ATCC 29213 were 2 and 0.38 mg/L, respectively. All the *K. kingae* strains had a cefazolin MIC under the "non-species related" MIC breakpoints (1 mg/L) as proposed by EUCAST. Moreover the cefazolin MICs of the *K. kingae* isolates were lower than those of *S. aureus*, for which the epidemiological cut-off is 2 mg/L.

The recent description of penicillinase-producing *K. kingae* strains with the potential risk of a global emergence and dissemination [6], as well as the necessity to cover *S. aureus* in case of culture and PCR negative septic arthritis, lead to reconsider the first-line treatment. Cefazolin appears well active among *K. kingae* beta-lactamase producers.

Although beta-lactamase producing *K. kingae* strains remain uncommon, international collaboration to monitor their spread is crucial. The present study investigated a sample of *K. kingae* strains representative of the diversity of the species throughout the world. Our results indicate that *in vitro* susceptibility of *K. kingae* to cefazolin is compatible with the use of this drug in probabilistic treatment of bone and joint infections in young infants.

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