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P1627 In vitro activity of fosfomycin against Pseudomonas aeruginosa recovered from urines of patients attended to primary care centers in northern Spain

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Background: *Pseudomonas aeruginosa* is an important cause of urinary tract infections (UTI) specially in patients with risk factors. Multi-drug resistance (MDR) in clinical *P. aeruginosa* is of particular concern since only a few therapeutic choices remain available. This problem is aggravated in patients attended to primary care centers (PCC), because oral treatment options are almost null. Ciprofloxacin is one of the few exceptions and fosfomycin could be an interesting alternative. The aim of the present study was to evaluate the *in vitro* activity of the latter antibiotic against a contemporary collection of *P. aeruginosa* recovered from patients diagnosed with UTI attended to a PCC.

Materials/methods: All *P. aeruginosa* isolates recovered from urines from patients attended to the PCC from May 2016 to October 2017 were retrospectively reviewed. Bacterial identification was performed by MALDI-TOF MS (Bruker Daltonik, Bremen, Germany) or by the MicroScan System (Beckman Coulter, CA, USA), which was also applied for AST. Since breakpoints to fosfomycin are not available for this species, neither in CLSI nor in EUCAST, the CLSI criteria for *Enterobacteriaceae* were applied (S≤64, R≥256). MICs to other drugs were interpreted according to *P. aeruginosa* CLSI breakpoints.

Results: A total of 350 isolates of *P. aeruginosa* isolates were analysed. 194 (55.4%) and 204 (58.3%) isolates were susceptible to fosfomycin and ciprofloxacin, respectively. Interestingly, 45 (12.8%) isolates resistant to ciprofloxacin were susceptible to fosfomycin.

Conclusions: 55.4% of the isolates were susceptible to fosfomycin, with 12.8% of them being resistant to ciprofloxacin. If the EUCAST epidemiological cut off (ECOFF) of 128 µg/mL were applied, as suggested by some authors, the percentages would be even higher. However, they could not be calculated since the Microscan panels include only dilutions from 16 to 64 µg/mL. Intravenous fosfomycin has demonstrated efficacy when combined with other antimicrobials for the treatment of UTIs caused by MDR *P. aeruginosa.* Further *in vivo* analysis should be performed to elucidate if oral regimens of this drug could be also efficient for the treatment of uncomplicated UTIs. This would open the narrow therapeutic window currently available for the treatment of *P. aeruginosa* in the community.