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Phenotypic aidentification and antibiogram profile of *Citrobacter* species

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The administration of antimicrobial agents on patients had a major impact on the rate of survival from infections. However, the evolving and the changing patterns of antimicrobial resistance posed a threat and caused a demand for review of the existing antibiotic policy or a demand for new antibacterial agents. This study was designed to determine the phenotypic identification in *Citrobacter* species and antibiogram profile of *Citrobacter* species isolated from the University College Hospital (UCH), Ibadan. Twenty clinical isolates of clinical specimens were recovered from patients using the laboratory services of UCH between December 2016 and March 2017. Preliminary confirmatory test to identify the isolates as *Citrobacter* were then performed using oxidase strips and Microbact™ 12A and 24E (Oxoid, UK) identification kits. Antibiotic susceptibility tests (antibiogram profile) was carried out on the identified *Citrobacter* isolates using some common antibiotics and minimal inhibitory concentrations (MICs) of piperacillin/ tazobactam tested against the *Citrobacter* spp. were determined. Ofloxacin was active against all the four *Citrobacter* isolates (100%), with diameter zone of inhibition ranging from 18 mm to 25 mm. Closely followed is piperacillin/tazobactam which was active against three out of the four isolates (75%) with diameter zone of inhibition ranging from 26 mm to 40 mm. Two of the isolates (50%) showed susceptibility to co-trimoxazole (24 mm and 30 mm), and imipenem (18 mm and 35 mm). All the isolates were, however, resistant to cephalosporins (ceftazidime, cefotaxime and cefoxitin), cloxacillin, oxacillin, piperacillin, meropenem, nystatin and combination of ampicillin + clavulanic acid. MIC values were quite high ranging from 100 µg/mL to 110 µg/mL. This study highlighted the prevalence of *Citrobacter* species among clinical samples in southern Nigeria and the multi-drug resistant nature of the isolated *Citrobacter* species.

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