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Abstract

Pseudomonas aeruginosa was isolated in low rates from stool specimens of outpatients and inpatients (7% versus 12%) but in higher rates from chlorinated and nonchlorinated water sources (15% versus 44%), respectively in Jordan. The same biotype was recognized among 90% of P. aeruginosa isolates from patient's stools and water sources using specific biochemical profiles. Three serogroups belonging to 01, 06 and 011 accounted for the majority of these isolates in water (66%) and stools (78%), respectively. All P. aeruginosa isolates from water were highly susceptible (87%-100%) to piperacillin-tazobactam, amikacin, gentamicin, imipenem, aztreonam, ceftazidime and ciprofloxacin, whereas the isolates from stool were slightly less susceptible (81%-98%) to these antimicrobials. P. aeruginosa isolates from water and stool sources were almost equally highly resistant to tetracycline (86%-89%) and carbenicillin (88%-89%), respectively. One common small plasmid (15.4 kb) was detected in 14/25 (56%) of multidrug-resistant P. aeruginosa isolates from both water and stool. This study demonstrates certain common epidemiological characteristics including antimicrobial resistance pattern, biotypes and serotypes among P. aeruginosa isolates from patient's stools and drinking water sources in Jordan.