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Phenotypic detection of carbapenemases from extended spectrum beta lactamases producing *E. coli* isolated from cases of urinary tract infection

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Extended-spectrum B-lactamases (ESBLs) producing *E. coli* is a clinical threat that may cause nosocomial as well as community-acquired urinary tract infection. It is recommended that ESBL detection should be a two-step process, a screening step to be followed by a confirmatory step. Carbapenems are a unique class of β -lactam antibiotics with the widest spectrum of antibacterial activity among the currently available antibiotics and are considered as the last resort for treatment of extended-spectrum B-lactamases (ESBL) producing *E. coli*. Carbapenemases are enzymes that can recognize carbapenems and almost all hydrolyzable β -lactams. We aimed at detection of carbapenemases' production among ESBL-producing *E. coli* isolated from community acquired UTI. Out of 44 ESBLs producing *Enterobacteriaceae* isolated from community acquired UTI, 36 were identified as *E. coli* by API20E then were tested for carbapenemases' production by screening and confirmatory phenotypic detection. None of the tested ESBL-producing *E. coli* was proved to produce carbapenemases. In conclusion, carbapenemase production was not found in any of the tested isolates, however, care in its detection is mandatory and laboratories need new tools that provide dependable and accurate diagnostic results.

Biography

Basma El-Awady completed her MD from Cairo University on March, 2014 and has published her MD thesis in the *International Arabic Journal of Antimicrobial Agents* and she is completing her Postdoctoral studies in Cairo University. She is a Lecturer in Medical Microbiology and Immunology Department in Kasr Al Ainy Faculty of Medicine, Cairo University. She is an active participant in many international conferences and symposia by presenting poster and oral presentation.

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