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PHENOTYPIC COFIRMATORY DISC DIFFUSION TEST (PCDDT), DOUBLE DISC SYNERGY TEST (DDST), E-TEST OS DIAGNOSTIC TOOL FOR DETECTION OF EXTENDED SPECTRUM BETA LACTAMASE (ESBL) PRODUCING UROPATHOGENS

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ABSTRACT

Background: The aim of this study was to probe the best diagnostic tool for the detection of Extended Spectrum β –lactamase (ESβL) producing uropathogen and their antimicrobial susceptibility profile to treat the infections properly. **Methods:** Clinical samples of urine were cultured on Cysteine Lactose Electrolyte Deficient (CLED) Agar medium. Antimicrobial sensitivity tests were carried out by Kirby-Bauer disc diffusion method. Phenotypic methods were used for further confirmation of β- lactamase production by phenotypic confirmatory disc diffusion test (PCDDT), double disc synergy test (DDST) and by E-test for ESBL production**.** Aswab on Mueller-Hinton (MH) agar plates was used for further studies and the Optical Density (O.D.) of the cultures was set to 0.1 (at 530 nm). **Results:** Sample size N= 200 was selected from patients suffering from UTI. Out of the 200 samples, n=141 samples yielded Aerobic Gram Negative Bacteria (AGNB). The commonest organism isolated was *E.coli* n=108, best antimicrobial result of 95% was shown by imipenem. Among the AGNB isolates, 20 organisms (12.98%) were ESBL producers. *E.coli* showed highest ESBL production of 85%. The most effective antimicrobial in ESBL producers was Imipenem (84%) Augmentin was least sensitive (05%).**Conclusion:** ESBL production is a common phenomenon in UTI patients and screening