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## Risk factors for infection with extended-spectrum β-lactamase (ESBL)-producing bacteria at the King Abdulaziz Specialist Hospital, Taif, Saudi Arabia

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**E** SBLs are enzymes that break down the lactam ring and enable bacteria to resist β-lactam antimicrobials. In this retrospective study, undertaken from 12 February to 31 August 2017, isolates obtained from the King Abdulaziz Specialist Hospital, Taif, were analyzed. ESBL-producing bacteria were detected using standard bacteriological methods, the MicroScan Walkaway and double-disc synergy tests. The ESBL phenotype was detected in 179 of 665 isolates (26.91%); *Escherichia coli* (58.1%) was the most prevalent, followed by *Klebsiella pneumoniae* (25.69%). Urine specimens accounted for the largest proportion of ESBL-producing bacteria (62.56%) and ESBL-producing bacteria were mainly isolated from the female medical ward (17.87%). Risk factors contributing to the spread of ESBL infection include renal disease, diabetes, female gender and excessive use of drugs. The carbapenem family is the best choice for treating cases of ESBL infection; however, it should be noted that strains of *Klebsiella pneumoniae* that are able to resist this kind of antimicrobial agent are emerging. It is very important to focus on effective methods of prevention (e.g., implementing programmes to explore the disease and following up) to limit the spread of infection.

## Biography

Ali Saleh Alghamdi has completed his MSc in Infectious Diseases from the University of Western Australia and his Bachelor's degree in Microbiology from King Abdulaziz University, College of Science. He is presently a PhD student of Microbiology at KAU.

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