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Antimicrobial Resistance of ESKAPE Pathogens in a Public Hospital in Alkharj

Nehad J. AHMED [1,2] *, Abdul HASEEB [3], Mohamed A. HASSALI [4], Enas E. ELSAID [5] & Amer H. KHAN [2]

[1] *Department of Clinical Pharmacy, Pharmacy College, Prince Sattam Bin Abdulaziz University, Saudi Arabia*
[2] *Discipline of Clinical Pharmacy, Pharmacy College, Universiti Sains Malaysia, Malaysia*
[3] *Clinical Pharmacy Department, College of Pharmacy, Umm AlQura University, Saudi Arabia*
[4] *Discipline of Social Pharmacy, School of Pharmaceutical Sciences, Universiti Sains Malaysia, Malaysia*
[5] *Clinical Pathology Department, Faculty of Medicine/ Al-Azhar University, Egypt.*

***SUMMARY*. Antimicrobial resistance among both Gram-negative and Gram-positive bacteria has been on the rise in the previous years. The presence of multidrug-resistant microorganisms has become a source of serious concern with regard to hospital-acquired infections. The most threatening and common multidrug-resistant pathogens have been grouped together under 'ESKAPE' acronym that stands for *Enterococcus faecium, Staphylococcus aureus, Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa* and *Enterobacter* spp. This study was conducted in Alkharj city to explore the antimicrobial resistance rate of ESKAPE Pathogens in 2017 and 2018. The data were extracted from the laboratory department after the ethical IRB committee approved the study. In this study, we found that ESKAPE pathogens cause nearly half the infections that were caused by bacteria and the most common ESKAPE pathogen was *Klebsiella pneumonia,* followed by *Pseudomonas aeruginosa. Enterococcus faecium, Enterobacter. Pseudomonas aeruginosa* and *Klebsiella pneumonia* were multidrug resistant. *Acinetobacter baumannii* bacteria were extensively drug resistance.**

RESUMEN. La resistencia a los antimicrobianos entre las bacterias gramnegativas y grampositivas ha ido en aumento en los años anteriores. La presencia de microorganismos resistentes a múltiples fármacos se ha convertido en una fuente de grave preocupación con respecto a las infecciones adquiridas en el hospital. Los patógenos resistentes a múltiples fármacos más amenazadores y comunes se han agrupado bajo el acrónimo "ESKAPE" que significa *Enterococcus faecium, Staphylococcus aureus, Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa* y *Enterobacter* spp. Este estudio se realizó en la ciudad de Alkharj para explorar la tasa de resistencia a los antimicrobianos de los patógenos ESKAPE en 2017 y 2018. Los datos se extrajeron del departamento de laboratorio después de que el comité ético del IRB aprobó el estudio. En este estudio, encontramos que los patógenos ESKAPE causan casi la mitad de las infecciones causadas por bacterias y el patógeno ESKAPE más común fue la neumonía por *Klebsiella,* seguido de *Pseudomonas aeruginosa*. *Enterococcus faecium, Enterobacter, Pseudomonas aeruginosa* y *Klebsiella pneumonia* eran multirresistentes. La bacteria *Acinetobacter baumannii* presentaba una gran resistencia a los fármacos.

KEY WORDS: antibiotic resistance, Antimicrobial resistance, Bacteria, ESKAPE.

* Author to whom correspondence should be addressed. *E-mail:* pharmdnehadjaser@yahoo.com

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