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The Epidemiology of Antimicrobial Resistance in a Tertiary Hospital in Al Seih

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SUMMARY. **Antibiotic resistance causes longer hospital stays, higher medical expenses, and higher mortality rates. This retrospective study was conducted to describe the rate of antimicrobial resistance in a tertiary hospital in Al Seih. In 2021, 522 bacterial isolates were collected in the hospital. Most of the isolated bacteria were gram-negative bacteria (84.10%). The most common bacteria were** *Klebsiella pneumoniae* **(22.41%),** ***Escherichia coli*** **(17.62%),** ***Pseudomonas aeruginosa*** **(16.09%),** ***Acinetobacter baumannii*** **(12.84%), and** ***Staphylococcus aureus*** **(10.15%). The present study showed high resistance rates of** ***Escherichia coli, Klebsiella pneumoniae,*** **and** ***Proteus mirabilis*** **to numerous antibiotics. The study also showed that** *Acinetobacter baumannii was* **resistant to all of the tested antibiotics. It is advised to raise public knowledge of the responsible use of antibiotics as well as the awareness of health care specialists regarding the appropriate prescribing of antibiotics based on antimicrobial resistance rates.**

RESUMEN. La resistencia a los antibióticos provoca estadías hospitalarias más prolongadas, mayores gastos médicos y mayores tasas de mortalidad. Este estudio retrospectivo se realizó para describir la tasa de resistencia a los antimicrobianos en un hospital terciario en Al Seih. En 2021 se recolectaron 522 aislamientos bacterianos en el hospital. La mayoría de las bacterias aisladas fueron bacterias gramnegativas (84,10%). Las bacterias más frecuentes fueron *Klebsiella pneumoniae* (22,41 %), *Escherichia coli* (17,62 %), *Pseudomonas aeruginosa* (16,09 %), *Acinetobacter baumannii* (12,84 %) y *Staphylococcus aureus* (10,15 %). El presente estudio mostró altas tasas de resistencia de *Escherichia coli*, *Klebsiella pneumoniae* y *Proteus mirabilis* a numerosos antibióticos. El estudio también mostró que *Acinetobacter baumannii* era resistente a todos los antibióticos probados. Se recomienda aumentar el conocimiento público sobre el uso responsable de los antibióticos, así como la concienciación de los especialistas de la salud sobre la prescripción adecuada de antibióticos en función de las tasas de resistencia a los antimicrobianos.

KEY WORDS: bacteria, Gram-negative, Gram-positive, resistance.

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