4CPS-107 EFFECT OF PATIENT BODY WEIGHT ON THE PHARMACOKINETIC BEHAVIOR OF AMIKACIN

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BACKGROUND AND IMPORTANCE

Obesity is a disease that influences numerous physiological processes. In order to optimize the dosage of drugs in obese patients, it is necessary to design specific population models in this group of patients.

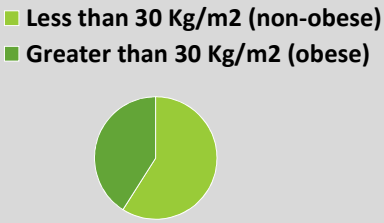
AIM AND OBJECTIVES

❑ To analyze the differences in the pharmacokinetic parameters of amikacin in hospitalized patients based on body mass index (BMI)

MATERIALS AND METHODS

Retrospective observational study in which patients treated with amikacin between January and August 2022 were analyzed.

POPULATION | **42 patients** | **156 levels of amikacin**



✓ Collected variables:
- Age: 69± 28 years
- Weight
- Height
- Sex
- Serum creatinine
- Dosage regimen
- Amikacin level.

✓ The mean and standard deviation of the volume of distribution (Vd) and clearance (Cl) of the two groups were calculated using a pharmacokinetic program (MwPharm).

✓ Statistical analysis was performed using Student's t-test for independent samples.

RESULTS

- The mean and standard deviation of Cl of obese patients and normal weight were 2.67 ± 1.41 L/h and 1.92 ± 1.04 L/h, respectively.
  - **P-value from t-test was 0.04 ($p < 0.05$) for Cl.**
- Vd data were 0.314 ± 0.068 L/Kg (obese) and 0.28 ± 0.034 L/h (normal weight).
  - **P-value was 0.648 ($p>0.05$) for Vd.**

CONCLUSION AND RELEVANCE

- Statistically significant differences were found in Cl between both groups: in obese patients, amikacin Cl was higher than in patients with normal weight.
- No significant differences in Vd were found between the two study groups.
- Future studies are needed to design population pharmacokinetic models of amikacin in obese patients.

References and/or Acknowledgements :
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