BACKGROUND

Ceftazidime-avibactam and ceftolozane-tazobactam are new second generation cephalosporin/β-lactamase inhibitor combinations. The antimicrobial spectrum of activity includes multidrug-resistant gram-negative bacteria, including Pseudomonas aeruginosa. Ceftazidime-avibactam is also active against carbapenem-resistant Enterobacteriaceae that produce Klebsiella pneumoniae carbapenemases.

AIM AND OBJECTIVES

To evaluate the use of ceftazidime-avibactam and ceftolozane-tazobactam from a Spanish general hospital (400 beds).

MATERIAL AND METHODS

Prospective and descriptive study

October 2016 to September 2020

Variables collected:
- Demographic: age and sex
- Clinical: type of infection, microorganism isolated, duration of treatment, dose administered, clinical service and antibiotic tested in the antibiogram.

RESULTS

Prescribing clinical services:
- Ceftazidime-avibactam: 16% ICU, 21% General surgery, 13% Hematology
- Ceftolozane-tazobactam: 69% ICU, 33% General surgery

Clinical indications:
- Complicated intra-abdominal infections (cIAIs)
- Complicated urinary tract infections (cUTIs)
- Community acquired pneumonia (CAP)
- Ventilator-associated bacterial pneumonia (VABP)

Both antibiotics were susceptible in 75% of patients. Clinical and microbiological resolution of the infection:
- 75% ceftazidime-avibactam
- 70% for ceftolozane-tazobactam

17.5% died during the hospitalization because of their clinical situation

CONCLUSIONS

- Both patient populations were demographically similar but the use of ceftazidime-avibactam was more frequent.
- cIAIs and pneumonias were the most common infections treated. Mostly, ceftazidime-avibactam was used for carbapenemase-producing K. pneumoniae and ceftolozane/tazobactam for P. aeruginosa multiresistant.
- ICU and general surgery were the most experienced clinical services.
- Both antibiotics were tested in the antibiogram in most of the cases.

REFERENCES


No conflict of interest

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