

EVOLUTION OF CEFTAZIDIME/AVIBACTAM UTILIZATION FOLLOWING ANTIMICROBIAL STEWARDSHIP CONSOLIDATION IN A TERTIARY HOSPITAL

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BACKGROUND AND IMPORTANCE

Ceftazidime/avibactam (CZA) is a restricted-use antibiotic indicated for targeted treatment of infections caused by multidrug-resistant Gram-negative aerobic bacteria, in accordance with the hospital's antimicrobial stewardship program (ASP) protocol.

AIMS AND OBJETIVES

To evaluate the evolution of CZA prescribing after the consolidation of an ASP, comparing two periods and assessing the appropriateness of therapy.

MATERIALS AND METHODS

Retrospective, observational, descriptive study of CZA use during two periods (Dec 2021–Dec 2022) and (Dec 2023–Jun 2025) in a tertiary hospital.

Variables collected: sex, age, prescribing service, microorganism, type of therapy (empirical or targeted), microbiological isolation, indication, and clinical outcome.

RESULTS

Patients included: 46 (Period 1) vs 40 (Period 2).

- **Demographics:** female 26% vs 32%; mean age 60.2 ± 15.6 vs 56.0 ± 18.3 years; mortality 35% vs 26%.
- **Therapy type:** empirical 52% vs 38% (non-resistant cases 37% vs 26%); prior microbiological isolation 48% vs 62%.
- **Prescribing service:** Infectious Diseases 10% vs 22%.
- **Targeted therapy:** CZA prescribed against multidrug-resistant Gram-negative bacteria 28% vs 55%.

TARGETED TREATMENTS			
PERIOD 1		PERIOD 2	
Gram + (20%)	Gram – (28%)	Gram + (7%)	Gram – (55 %)
1 <i>Staphilococcus petrasii</i>	7 <i>Pseudomonas aeruginosa</i> mR	2 <i>Enterococcus faecium</i>	9 <i>Pseudomonas aeruginosa</i> mR
5 <i>Stahilococcus epidermidis</i>	1 <i>Escherichia coli</i> OXA-48		1 <i>Escherichia coli</i> BLEE
SARM	1 <i>Klebsiella pneumoniae</i> BLEA		2 <i>Klebsiella pneumoniae</i> BLEE
2 <i>Staphilococcus haemoliticum</i>	1 <i>Enterococcus faecium</i> VanR		1 <i>Klebsiella pneumoniae</i>
SARM	3 <i>Stenotrophomonas maltophila</i>		OXA-48
1 <i>Staphilococcus aureus</i> SARM			2 <i>Stenotrophomonas maltophila</i>

CONCLUSION AND RELEVANCE

ASP consolidation was associated with a 27% increase in prescription appropriateness. Empirical use and prescriptions for Gram-positive isolates remain outside protocol, despite a declining trend.

CZA should remain restricted to confirmed MDR Gram-negative infections or sepsis with microbiological guidance.

