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A SINGLE-CENTRE, RETROSPECTIVE, OBSERVATIONAL COHORT STUDY TO EVALUATE THE IMPACT OF CEFIDEROCOL IN PATIENTS WITH INFECTIONS CAUSED BY MULTIDRUG-RESISTANT GRAM-NEGATIVE BACTERIA

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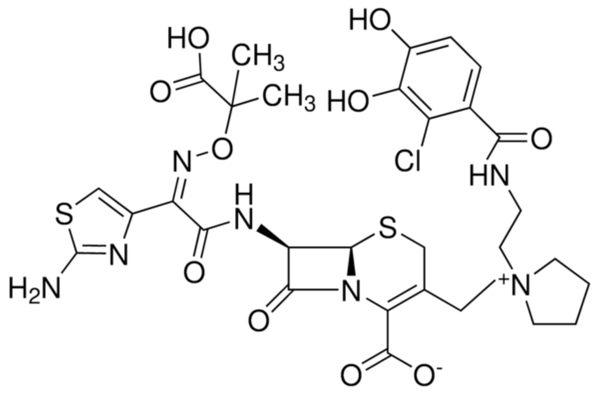
Background and importance

Cefiderocol, a new siderophore cephalosporin, was the first antibiotic to receive full innovativeness in the treatment of multidrug-resistant (MDR) Gram- infections.



Aim and objectives

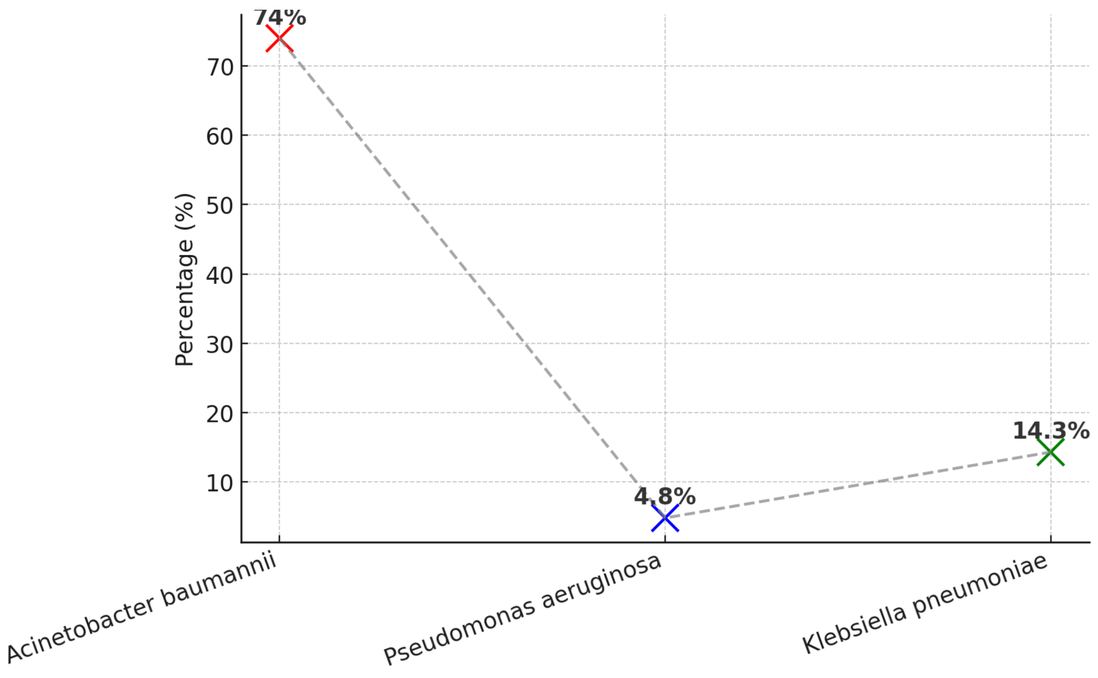
The aim of the study is to describe the clinical use profile of cefiderocol and assess its impact on mortality rate.

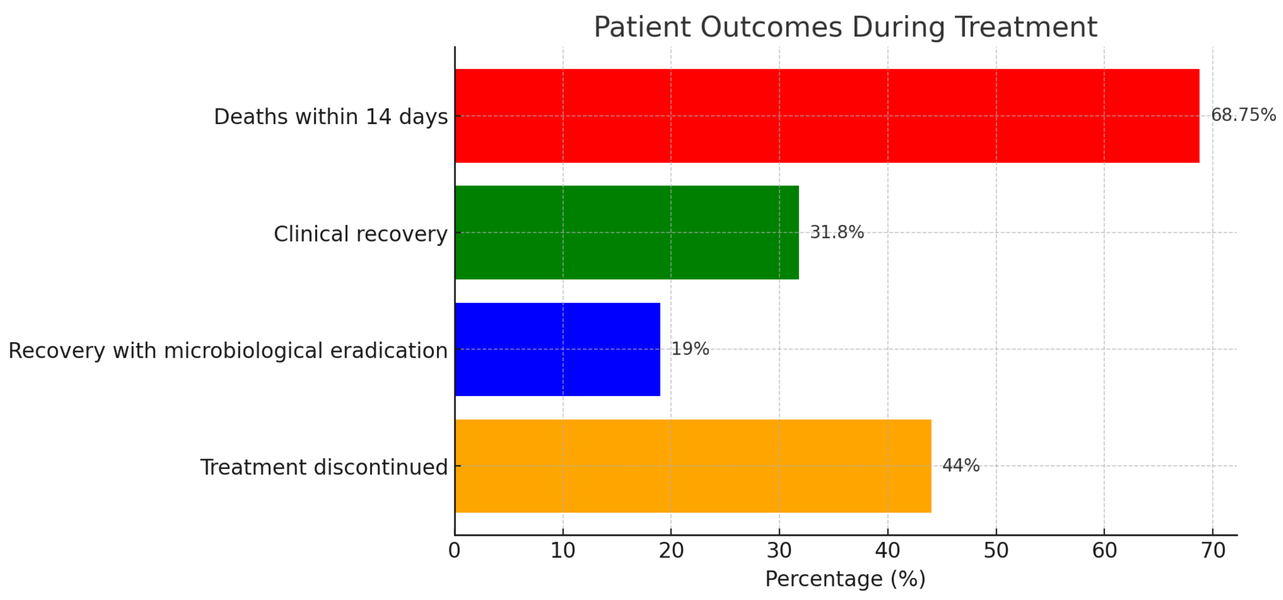
Material and methods

Demographic, clinical and microbiological data were collected by analysing the medical records of patients treated with cefiderocol between April 2023 and May 2024 at a University Hospital. The primary endpoint was the assessment of all-cause mortality rate at 14 and 28 days. Secondary endpoints of the study were the response rate, in terms of clinical cure or eradication. Descriptive statistics were performed using R [95% confidence intervals (CI)].

Results

Sixty-six subjects with Gram- MDR infections were included in the study, including 46 males and 20 females (mean age: 63.8 years). 14% of the patients were admitted to an Intensive Care Unit. The 54.5% of the patients had respiratory tract infections with pneumonia. In total, 39.4% of the patients presented bacteremia. Skin, soft tissue and osteoarticular infections were detected in 9% of the patients, and urinary infections in 3%. The main pathogens identified were Acinetobacter baumannii (74%), Pseudomonas aeruginosa (4.8%), Klebsiella pneumoniae (14.3%). In 6.1% of the subjects more than one concomitant pathogen was present. The mean duration of treatment was 13.33 days[CI-95%:11.17,15.49]. In 88% of cases, cefiderocol was administered with other antibiotics, mainly fosfomycin(19%), caspofungin(14%), colistin ev(9%) and vancomycin(9%). The overall mortality was 25.75% [CI-95%:0.15,0.37], of which 75% were from causes unrelated from the infection. 53% of the dead patients were infected with Acinetobacter baumannii. 68.75% of the deaths occurred within 14 days of the start of treatment. 31.8% of patients recovered from a clinical point of view, of which 19% with microbiological eradication. Finally, 44% of patients discontinued their treatment by clinica





Conclusion and relevance

The study showed a lower mortality rate compared to the registration trial (33.7%), with more deaths occurring within two weeks of starting treatment. Furthermore, we confirm the association shown in the clinical trial between mortality and infection with Acinetobacter baumannii, the main colonising pathogen.

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