

# CEFIDEROCOL: EFFECTIVENESS AND MORTALITY OF MULTIDRUG-RESISTANT BACTERIA INFECTIONS, A RETROSPECTIVE OVERVIEW

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## BACKGROUND AND IMPORTANCE

Cefiderocol is a novel siderophore-cephalosporin conjugate, with activity against carbapenem-resistant and multidrug-resistant gram-negative bacilli. The novelty of and need for cefiderocol are clear but available real-setting clinical data are limited.

## AIM AND OBJECTIVES

To determine the effectiveness of cefiderocol (microbiological eradication, clinical cure, and recurrence), and mortality of treated infections.

## MATERIALS AND METHODS

- Retrospective study that included all patients with active infection and treatment with cefiderocol during March 2021-July 2023.
- Demographic, clinical, infection, and treatment variables were collected.
- Patients with microbiological eradication (negative culture), clinical cure, recurrence of infection (positive culture), early (7-10 days from initiation of cefiderocol), and 30-day mortality were calculated.
- Statistical analysis: values were expressed as medians (interquartile range) and patients (percentages).

## RESULTS

### SOCIO-DEMOGRAPHIC

- Patients included in the study: 43
- Male: 27/43 (62.8%)
- Median age: 66.0 (57.7-73.5) years
- Median hospital stay: 64.1 (29.9-89.3) days
- Patients requiring admission to the ICU: 29/43 (67.4%)
- Median ICU stay: 42.0 (25.0-83.0) days.

### INFECTIONS DATA

- Main focus of infection: Figure 1.
- Patients presenting more than one focus: 5/43 (11.6%).
- Patients with sepsis: 11/43 (25.6%).
- 57 multidrug-resistant gram-negative bacteria isolated.
- 14 gram-positive bacteria isolated.
- More than one microorganism was isolated in 19/43 (44.2%) patients
- Patients presenting more than one microorganism isolated.

### TREATMENT PATTERNS

- Isolates with resistance to cefiderocol: 3/43 (7.0%).
- Median duration of treatment: 9.0 (6.0-17.5) days.
- In 36/43 (83.7%) patients more than one antibiotic was used, and 18/43 (41.9%) of them, with synergistic action.

### EFFECTIVENESS AND MORTALITY → Table 1.

Figure 1. Focus of infection

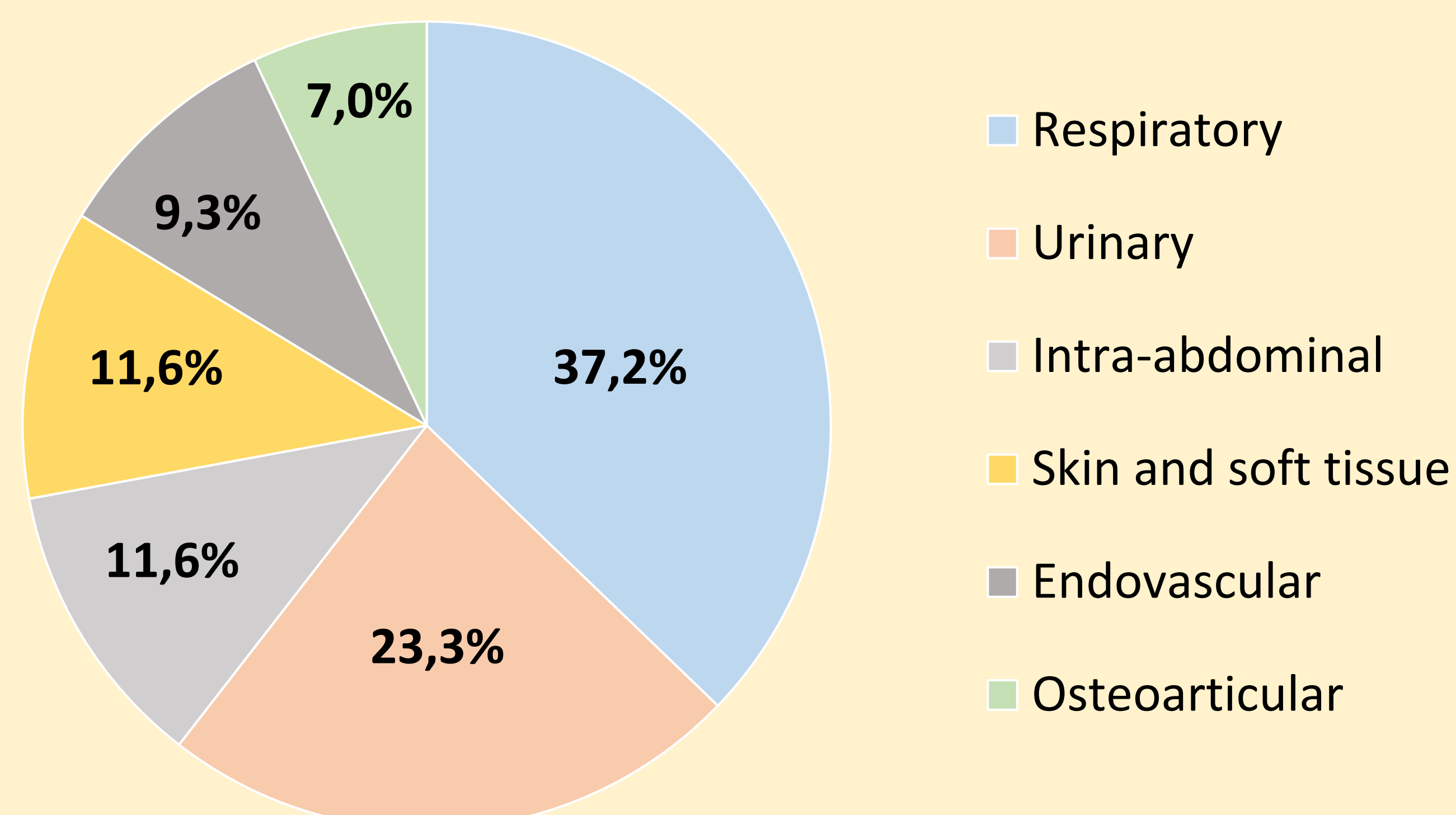


Table 1. Effectiveness and mortality data [n(%)]

Microbiological eradication achieved	31/43 (72.2)
Indeterminate microbiological eradication	4/43 (9.3)
Clinical cure	35/43 (81.4)
Early mortality (14 days)	2/43 (4.7)
Mortality at 30 days	7/43 (16.3)
Intra-hospital mortality	13/43 (30.2)
recurrence of infection	8/43 (18.6)

## CONCLUSION AND RELEVANCE

- Cefiderocol was effective in the treatment of multidrug-resistant gram-negative bacteria infections in our cohort, with a high rate of admission to the ICU, and large hospital stay.
- Microbiological eradication was lower than clinical cure, influenced by loss of values.
- Mortality rates were low in this clinical stage, with intra-hospital mortality being the highest.



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