

Identifying Effective Durations of Antibiotic Therapy for the Treatment of Carbapenem-resistant Enterobacterales Bloodstream Infections: A Multicenter Observational Study

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BACKGROUND

- >3 clinical trials indicate that approximately **7 days** of antibiotic therapy are sufficient for the treatment of **gram-negative bloodstream infections (GN-BSI)**.
- It is unknown, if durations need to be extended for the treatment of GN-BSI caused by CRE.

OBJECTIVE

To determine if relatively short durations of active antibiotic therapy (ie, 7–10 days) are as effective as prolonged durations of antibiotic therapy for CRE BSI.

SETTING

Retrospective,observational study

Population : adult patients with CRE BSI

Study period : 1st January 2019 until 31st December 2019

PRIMARY OUTCOME

Composite of all-cause mortality or a recurrent BSI with the same bacterial species, both within 30 days of completing antibiotic therapy.

Short course: 7–10 days
VS

Long course: 14–21 days



RESULTS

N= 183



Short course = 66 (36%)

Long course = 117 (64%)

Common organisms : K. pneumoniae = 96(52%)

E. cloacae = 66(36%)

Common antibiotic regimes :

CEFTAZIDIME-AVIBACTAM = 75 (41%)

MEROPENEM-VABORBACTAM = 19 (11%)

HIGH DOSE EXTENDED MEROPENEM INFUSION = 89 (49%)

- All-cause mortality (3.4% vs 4.6%)
- Recurrent bacteremia (6.1% vs 5.7%)

CONCLUSIONS

- 7–10 days of antibiotic therapy may be sufficient for patients with CRE BSI.
- Durations may need to be extended for patients with persistent sources of infection.