

USE OF CEFIDEROCOL FOR MULTIDRUG-RESISTANT ACINETOBACTER BAUMANNII IN PATIENTS WITH SARS-COV-2: TWO CASE REPORTS

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BACKGROUND AND IMPORTANCE

Cefiderocol is a new siderophore **cephalosporin** for the treatment of multidrug-resistant gram-negative pathogens, such as **Acinetobacter baumannii (AB)**.

AIM AND OBJECTIVES

To describe our **clinical experience** about cefiderocol use in two SARS-CoV-2 patients with ventilator-associated pneumonia (VAP) due to **multidrug-resistant AB (MRAB)**.

MATERIAL AND METHODS

- A **descriptive retrospective study** about cefiderocol therapy in two patients with **MRAB** was conducted until 31/08/2021.
- Electronic medical record was used to collect **data**: comorbidities, baseline clinical context, treatment, and clinical evolution of patients.

RESULTS

- A **49-year-old** man with hypertension, obesity and chronic renal insufficiency was diagnosed with SARS-CoV-2. He required orotracheal intubation (OI) and mechanical ventilation (MV). The patient presented VAP after 4 weeks in Intensive Care Unit (ICU).
- **Panresistant AB** was isolated from bronchoalveolar lavage (BAL) and was treated with **cefepime, imipenem, tigecycline** and **nebulized colistin**. Given poor clinical improvement, **cefiderocol 2 g/8 hours (14 days)** was initiated. No renal dose adjustment was performed for cefiderocol.
- Clinical evolution was favorable. The patient remained afebrile and acute phase reactants (APR) decreased. Unfavorable evolution and increased APR were observed on the third day after treatment with cefiderocol, with presence of AB in BAL. The patient died of multiorgan dysfunction syndrome eight days later.

- A **65-year-old man** with hypertension, dyslipidemia and diabetes was diagnosed with SARS-CoV-2. He required OI and MV. After 4 weeks in ICU, the patient presented VAP due to MRAB and co-infection with *Mycoplasma pneumoniae*.
- **Tigecycline, nebulized colistin** and **ceftazidime/avibactam** were used. A clinical worsening was observed and **cefiderocol 2 g/8 hours (14 days)** and **amikacin** (5 days) were started.
- The patient remained afebrile and APR slightly decreased after initiation of cefiderocol and amikacin treatments. BAL culture was negative, although AB colonization persisted in pharynx. Tigecycline, piperacillin/tazobactam and nebulized colistin were administered. After 71 days in ICU, the patient was transferred to hospital ward, where he remained for 98 days before discharge.

CONCLUSION AND RELEVANCE

- The use of **cefiderocol** led to a slight improvement in two patients with VAP caused by MRAB.
- One patient died due to multiorgan dysfunction syndrome after cefiderocol therapy, and the other case required subsequent antibiotherapy due to persistence of MRAB.