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CEFIDEROCOL TREATMENT IN COVID-19 POSITIVE PATIENTS CO-INFECTED WITH PAN-RESISTANT PSEUDOMONAS AERUGINOSA

ATC code: J01 – Antibacterial for systemic use

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BACKGROUND AND IMPORTANCE

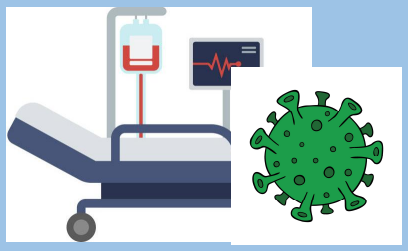
Immunosuppression due to SARS-CoV2 infection (COVID19) has caused an increase in identification of multiresistant organisms in Intensive Care Units (ICU), among which multiresistant Pseudomonas aeruginosa rise about others. Cefiderocol is a costly new cephalosporin against extensively resistant Gram-negative bacteria.

AIM AND OBJECTIVES

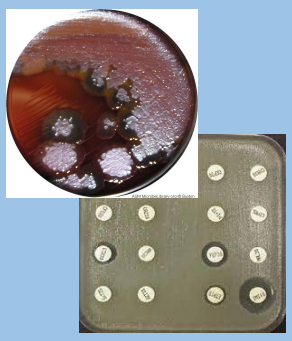
The objective of this study is to describe the characteristics and clinical results of patients treated with cefiderocol, as well as the dosage of this treatment, in ICU inpatients with COVID19 pneumonia and co-infected with pan-resistant Pseudomonas aeruginosa.

MATERIALS AND METHODS

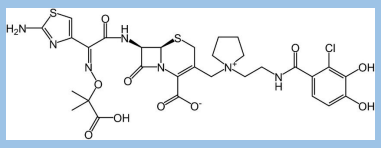
September 2020 to December 2021



ICU patients with COVID 19 pneumonia



PAN-RESISTANT PSEUDOMONAS AERUGINOSA



CEFIDEROCOL

COLLECTED DATA:
- Days admitted in ICU
- Day of treatment with cefiderocol
- Concomitant treatment
- Cefiderocol dosage
- Results of the treatment

RESULTS

Three patients fulfilled the inclusion criteria among 70 patients admitted to ICU with COVID19 in the study period (4.3%). All patients included were men and the median age was 66.6 ± 6.5 years old. They presented as comorbidities obesity, hypertension and diabetes mellitus. They were admitted during 87 ± 28.6 days, with detection of pan-resistant P. aeruginosa in the range of 32.5 ± 2.1 days after admission at ICU. All of these cultures were only sensible to cefiderocol, being resistant to all other tested antibiotics. Due to that, all patients received cefiderocol during their stay and dose adjustment to their renal function or renal replacement therapy were applied. Every patient received a bolus of 2 grams in 30 minutes and the maintenance dose in at least 3 hours. The average of treatment days was 20.5 ± 4.5 days. In all cases, the isolated strains were sensitive to colistin, so cefiderocol was used in combination with it. The results of the treatment were disparate: one cure, one death, and one development of resistance to cefiderocol.

CONCLUSION AND RELEVANCE

Cefiderocol use for multiresistant bacteria treatment requires prior knowledge of its Pharmacokinetics, taking into account the physiological factors of patients in its dosage. New treatments are not exempt from the development of resistance.

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