## 4CPS-031 THERAPEUTIC DRUG MONITORING OF CEFTAZIDIME/AVIBACTAM ADMINISTERED BY CONTINUOUS INFUSION: PK/PD TARGET ACHIEVEMENT AND CLINICAL OUTCOMES

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**Background and Importance** Ceftazidime/avibactam (CAZ/AVI) is a novel betalactam antibiotic utilised for multi-drug resistant (MDR) gram-negative bacteria. Therapeutic drug monitoring (TDM) ensures that CAZ/AVI levels achieve the pharmacokinetic/pharmacodynamic (PK/PD) target. Continuous infusion (CI) has been used to optimise CAZ/AVI pharmacodynamics.
**Aim and Objectives** To analyse the correlation between PK/PD target attainment of CAZ/AVI administered by CI, clinical outcomes and toxicity.
**Material and Methods** Patients treated with CAZ/AVI administered by CI and undergoing TDM of the CAZ plasma concentrations were included. Definitions:
CAZ/AVI PK/PD target:

- time that CAZ free concentrations remain 4 times above the minimum inhibitory concentration (MIC) of the causative pathogen (%*f*T>4xMIC).
- Overexposure:%*f*T>10xMIC.
- Clinical cure: disappearance of all signs and symptoms related to the infection and no requirement for additional antibiotic treatment initiation (except as part of de-escalation strategy) for the disease to be investigated within 48h after completion of the study drug.
- Thirty-day all-cause mortality: death from any cause during the 30 days following the end of treatment.

When real MIC was not available, a MIC of 8 mg/L was assumed.
**Results** Thirty-one patients (28 males, median (range) age of 64 (37-78) years) infected with extensively drug-resistant *Pseudomonas aeruginosa* and extended-spectrum betalactamase-producing *Klebsiella pneumoniae* were included (26 directed treatments and 5 empirical).

Twenty-six (83.9%) achieved the PK/PD target, 15 of which presented overexposure. Only 4 (26.6%) overexposed patients presented adverse reactions (3 increased liver enzymes and 1 thrombocytopenia).

Twenty-one (67.7%) patients achieved clinical cure, 18 (85.7%) of which achieved the PK/PD target. There was a higher frequency of patients with a%*f*T>4xMIC that achieved clinical cure (18/26 (69.2%) in patients with clinical cure *vs* 2/5 (40%) with clinical failure, p= 0.686).

The 30-day all-cause mortality was 19.4% (6 patients). A lower mortality rate was observed in patients that did achieve a%*f*T>4xMIC (14.8%) in patients who survived vs 50% in those who died, p=0.096.
**Conclusion and Relevance** CI seems a useful strategy to reach the PK/PD target of CAZ/AVI. Few patients with overexposure presented adverse events. There seems to be a correlation between PK/PD target attainment, clinical cure and 30-day all-cause mortality but larger studies with bigger samples are needed.

### REFERENCES AND/OR ACKNOWLEDGEMENTS

**Conflict of Interest** No conflict of interest

## 4CPS-034 ANALYSIS OF THE EFFECTIVENESS OF SOTROVIMAB IN PATIENTS DIAGNOSED WITH COVID-19

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**Background and Importance** Sotrovimab is indicated in treatment of COVID19 in adults and adolescents who do not require supplemental oxygen and who are at increased risk of progressing to COVID-severe. The drug is administered according to prioritisation criteria published by the Spanish Agency of Medicines and Health Products (AEMPS)1.
**Aim and Objectives** To analyse the effectiveness of sotrovimab and to know the profile of patients.
**Material and Methods** Observational, retrospective and descriptive study in a tertiary level hospital. Patients who had received sotrovimab from January/2022-May/2022 were included. Variables: sex, age, mild-moderate/severe disease, vaccination-COVID, risk factors, hospitalisation/death at 29 day. Effectiveness was measured as rate of patients without progression to COVID-severe (defined as hospitalisation/death at 29 days). Variables were collected from digital medical records and in-hospital electronic prescribing.
**Results** Thirty-seven patients were included, mean age=61 years (21-82), 20 women (54.05%). Twenty-nine patients (78.38%) had mild-moderate COVID. 29 patients (78.38%) had received a complete vaccination regimen (3 doses), 6 patients (16.22%) two doses and 2 patients (5.41%) not vaccinated. Risk factors: 23 hypertension (62.16%), 13 diabetes (35.14%), 5 obesity (13.51%) and 4 asthma (10.81%). All patients were immunosuppressed. 17 patients (45.94%) with 2 risk factors, 9 with 3 risk factors (24.32%), 7 with 1 risk factor (18.91%) and 2 patients (5.40%) with 4 risk factors. According to the AEMPS prioritisation criteria, all belonged to the group of 'Immunocompromised persons and high-risk conditions, regardless of vaccination status'. The high-risk conditions were: 23 patients (62.16%) had received solid organ transplantation with immunosuppressive treatment, 13 patients (35.14%) had received immunosuppressive treatment with antiCD20 in the previous 6 months (100% rituximab) and 1 patient (2.7%) was receiving active treatment with myelotoxic chemotherapy (inotuzumab) for acute lymphocytic leukaemia. 7 patients (18.9%) were hospitalised/dead at 29 days (3 exitus). All these patients had received rituximab. 30 patients (81.1%) did not progress to severe COVID. During the study period, 6 patients attended the emergency department, without admission.
**Conclusion and Relevance** Most patients presented good response and tolerance to treatment. This result was independent of previous treatments or risk factors. Previous treatment with anti-CD20 seems to show a tendency to progression to severe COVID. Long-term studies are needed to confirm results