4CPS-235 SYSTEMIC CORTICOSTEROIDS IN THE TREATMENT OF SARS-COV-2 INFECTION

S Gutiérrez Palomo, A Rochina Astorga, A Gonzalez Fernandez, C Matoses Chirivella, M Morante Hernandez, A Navarro Ruiz*. *Hospital General Universitario De Elche, Hospital Pharmacist, Elche, Spain*

10.1136/ejhp-2021-eahpconf.67

Background and importance SARS-CoV-2 infection has different stages and there are different targets for possible treatment. Corticosteroid therapy is one treatment, and information on the experience of hospitals in the first months of a pandemic can be very useful in providing more evidence for routine clinical practice.

Aim and objectives To describe the use of systemic corticosteroids in the treatment of SARS-CoV-2 infection as well as the characteristics of the treated population.

Material and methods This was a retrospective observational study conducted in patients with confirmed SARS-CoV-2 infection between March and May 2020. Variables collected were: sex, age, date of admission and hospital discharge, comorbidities (respiratory pathology, arterial hypertension (AHT), diabetes mellitus (DM)), concomitant treatment with remdesivir and/or tocilizumab, stay in intensive care unit (ICU) and/or hospital ward, type of corticosteroid administered, dose, treatment duration and length of hospital stay. Variables were obtained from the electronic medical record programmes.

Results 102 patients were studied, 84 on the ward and 18 in the ICU, 66% men, with a mean age of 63 ± 16 years. Eight patients had respiratory pathology, 44 AHT and 30 DM. Three patients received remdesivir and 55 tocilizumab. Classifying patients by comorbidities, corticosteroids were given to 63% of patients with respiratory disease, 41% with HT and 30% with DM. Regarding concomitant treatment, 33% of patients treated with remdesivir and 40% with tocilizumab received corticosteroids. In total, 30 patients received corticosteroid treatment, 23 on the ward and 7 in the ICU. On the ward, the mean daily dose of methylprednisolone was 122 mg/day, with a mean duration of 4.5 days, while for prednisone it was 18 mg/day, with a duration of 1.7 days. In the ICU, the mean daily dose of methylprednisolone was 112 mg/day, with a duration of 5.8 days, and for prednisone, 12 mg/day, with a duration of 5.8 days. One patient received a single dose of 8 mg of dexamethasone. Mean hospital stay for ICU patients who received corticosteroids was 39.3 days compared with 26.3 days for those who did not receive corticosteroids; on the ward, mean stay was 20.5 and 10.8 days, respectively.

Conclusion and relevance Patients treated with corticosteroids required longer hospital stays, especially for ICU patients. Methylprednisolone dose was similar in the ICU and on the ward, but treatment duration was longer in the ICU. A high percentage of patients with comorbidities and treatment with remdesivir and/or tocilizumab required subsequent corticosteroid treatment.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-236 USE OF ETELCALCETIDE IN PATIENTS UNDERGOING HAEMODIALYSIS

E Monteagudo Santolaya*, L Cebrián Lara, R Colom Moreno, A Valcuende Rosique, A Sánchez Alcaraz. *Hospital Universitario De La Ribera, Clinical Pharmacy, Alzira, Spain*

10.1136/ejhp-2021-eahpconf.68

Background and importance Secondary hyperparathyroidism is a common complication in patients with chronic kidney failure undergoing haemodialysis. The use of calcimimetics is a suitable option for secondary hyperparathyroidism. Etelcalcetide is a synthetic peptide that binds to the calcium receptor causing a reduction in parathyroid hormone (PTH) secretion.

Aim and objectives To analyse the use of etelcalcetide in patients with secondary hyperparathyroidism due to chronic renal failure undergoing haemodialysis.

Material and methods A retrospective, descriptive, observational study was conducted including patients treated with etelcalcetide for a period of 6 months. The following variables were collected: demographics (age and sex); analytical measures (levels of PTH, corrected serum calcium and phosphate at the beginning of treatment and 6 months later; and therapeutic measures (initial average weekly dose of etelcalcetide and at 6 months and other concomitant treatments).

Results 45 patients were included with a mean age of 67 ± 11.7 years; 62.2% were men. The initial mean weekly dose of etelcalcetide was 9.2 ± 4.8 mg, increasing at 6 months to 10.5 ± 5.4 mg.

Initial laboratory values for all patients were: PTH 476.6 ± 328.6 pg/mL; corrected serum calcium 8.85 ± 0.64 mg/dL; and phosphate 4.86 ± 1.06 mg/dL. At 6 months, 25/45 patients (55.5%) had reduced PTH levels, with a mean percentage reduction of $25.7 \pm 19.8\%$. Of these 25 patients, 8 (40%) achieved a PTH reduction of $\geq 30\%$. Corrected serum calcium levels at 6 months decreased in 21/45 patients (46.7%), while phosphate levels decreased in 22/45 patients (49.9%). In addition, 25/45 patients (55.5%) were treated with a vitamin D analogue; 37/45 patients (82.2%) with phosphorus binders and 23/45 patients (51.1%) with both types of drugs.

Conclusion and relevance Etelcalcetide reduced PTH levels in more than 50% of the patients included in the study and can be considered an effective drug. Furthermore, the corrected serum calcium and phosphate concentrations remained within the optimal range in most patients.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-237 FEASIBILITY OF CONTINUOUS ADMINISTRATION OF ANTIMICROBIALS IN HOSPITAL: NOTHING IS EVER AS IT SEEMS?

¹V Grootaert*, ¹K Bigler, ²A Bervoet, ³J Van Praet, ⁴E Nulens. ¹Az Sint-Jan Brugge-Oostende Av, Pharmacy, Bruges, Belgium; ²Az Sint-Jan Brugge-Oostende Av, Intravenous Vascular Access Team, Bruges, Belgium; ³Az Sint-Jan Brugge-Oostende Av, Department of Nephrology and Infectious Diseases, Bruges, Belgium; ⁴Az Sint-Jan Brugge – Oostende Av, Department of Laboratory Medicine, Bruges, Belgium

10.1136/ejhp-2021-eahpconf.69

Background and importance Continuous infusion (CI) of antimicrobials is increasingly applied because of the pharmacokinetic and practical advantages, including the rapid achievement of stable target serum concentrations, ease of sampling as levels are determined during steady state and simple interpretation of therapeutic drug monitoring.

Aim and objectives To assess medication administration practices related to CI of antimicrobials.

Material and methods During a 10 day prospective observational survey in March 2019, we enrolled all consecutive

hospitalised non-ICU patients who received at least one antimicrobial suitable for CI. Amoxicillin, aztreonam, benzylpenicillin, ceftazidime, flucloxacillin, meropenem, piperacillin/tazobactam, temocillin and vancomycin were included as antimicrobials. Catheter type, number of lumens, administration mode, loading and maintenance dose, and pump settings were assessed by comparing the electronic prescription and patient file with the observations. Drug incompatibilities (DI) were analysed using the compatibility information provided in Trissel's two clinical pharmaceuticals database and categorised as compatible, incompatible, uncertain or none. DI were defined as incompatibility or uncertainty about the compatibility between at least two simultaneously Y site administered drugs.

Results 107 observations in 86 patients were performed and 113 antimicrobial prescriptions were analysed. Peripheral lines were most commonly used (53%), followed by central venous catheters (35%) and peripherally inserted central catheters (10%). Single, double, triple and quadruple lumen catheters accounted for 56%, 23%, 17% and 4%, respectively. CI therapy was prescribed, according to hospital guidelines, in 96% of patients, 93% of whom received a loading dose. In 96% of cases a correct maintenance dose was administered. Only 63% of the infusion bags/syringes were labelled appropriately. In 7% of the observations, the pump settings did not match the prescribed dose, causing both over and under dosing in three patients (defined as >105% and <95% of the prescribed daily dose, respectively). We observed DI in 28% (30/107) of cases, mostly with single lumen catheters (63%), and in haematological patients (37%). Moreover, change from CI to intermittent infusion was the only solution to overcome DI in 73% of these cases.

Conclusion and relevance We found that administration issues were common in CI of antimicrobials. In response, we started educational sessions, the hospital policy was slightly adapted, including allowing intermittent infusion in the case of DI, and we created a prescribing alert for the assistance of a clinical pharmacist for DI review.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-238 EVALUATION OF EFFECTIVENESS OF COMPOUNDED ORAL VANCOMYCIN CAPSULES FOR TREATMENT OF CLOSTRIDIUM DIFFICILE INFECTION

¹Á Narrillos Moraza*, ¹MS Pernía López, ²M Olmedo Samperio, ¹E Chamorro De Vega, ¹C Rodríguez Gonzalez, ¹J Vicente Valor, ¹B Somoza Fernández, ¹P Ruiz Briones, ¹A Herranz Alonso, ¹M Sanjurjo Saez. ¹Hospital General Universitario Gregorio Marañón, Hospital Pharmacy, Madrid, Spain; ²Hospital General Universitario Gregorio Marañón, Microbiology, Madrid, Spain

10.1136/ejhp-2021-eahpconf.70

Background and importance Oral vancomycin (125 mg four times daily) is the standard treatment for mild/moderate *Clostridium difficile* infection (CDI). As there are no marketed vancomycin capsules in our country, vancomycin 500 mg vials have been taken orally for this purpose. But high price, difficult acquisition and complicated dilution and administration, especially among elderly patients, were associated with poor adherence to treatment and a higher risk of recurrence.

Aim and objectives To study the clinical effectiveness of oral vancomycin in patients with CDI and to compare the utilisation of two different pharmaceutical forms: vials and capsules.

Material and methods A retrospective, observational, cohort study was conducted. Vancomycin 125 mg capsules were first compounded and dispensed by us in January 2018. Electronic health records of outpatients with an episode of CDI and receiving vancomycin vials (January 2017 to December 2017) or capsules (January 2018 to December 2018) were reviewed. Variables analysed were: demographics (sex, age), CDI episode (new episode, first recurrence, second or subsequent recurrence), vancomycin pharmaceutical form, treatment adequacy (dosing and duration, as recommended from clinical guidelines), recurrence rate (presence of symptoms within 60 days of treatment), treatment adverse effects and hypervirulent PCR-ribotype 027 strain cases (epidemiological and clinical interest).

Results 99 patients were included, 35 receiving vancomycin vials and 64 receiving compounded vancomycin capsules. Demographic characteristics were similar between groups (median age was 60 years; 59.6% women).

Vials cohort: 22 diagnoses of a new episode (62.8%), 11 first recurrences (31.4%) and 2 second or more recurrences (5.8%). Capsules cohort: 48 diagnoses of a new episode (55%), 13 first recurrences (20.3%) and 3 second or more recurrences (4.7%). Recurrence occurred within 60 days in 13 (37%) of the patients from the vial cohort and in 20 (31%) patients from the capsules cohort ($p=0.52$). Inappropriate oral vancomycin dosing decreased from 28.6% (vials) to 6.3% (capsules) ($p=0.002$). No vancomycin adverse effects were reported. PCR-ribotype 027 was found in 9 patients (9.1%).

Conclusion and relevance Oral vancomycin is safe regardless of the pharmaceutical form. Prescription adequacy improved with capsules. Further studies need to be done to confirm if dispensing capsules containing an appropriate drug dose relates to less recurrence rate, and better adherence and outpatient satisfaction.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-239 THERAPEUTIC DRUG MONITORING OF GENTAMICIN IN NEONATES

MP Ortega-García*, M Zaragoza-González, P Pérez-Villalón, I Gil-Gómez, A Moya-Gil Ana, E Gómez-Bayona, R Lagüa-Sánchez, P Blasco-Segura. Consorcio Hospital General Universitario De Valencia, Service of Pharmacy, Valencia, Spain

10.1136/ejhp-2021-eahpconf.71

Background and importance Peak (maximum plasma concentration)/MIC >8–15 is a pharmacokinetic (PK)/pharmacodynamic (PD) parameter that best correlates with the effectiveness of aminoglycosides. A peak between 8 and 15 mg/L is necessary to achieve this. In neonates, doses of 3–5 mg/kg/day for the first week and 7.5 mg/kg/day from the second to the fourth week of life are recommended.

Aim and objectives To evaluate the degree of adequacy of the initial dose with current recommendations and whether therapeutic drug monitoring (TDM) allows optimisation of treatment.

Material and methods A retrospective study was conducted from 1 January 2016 to 29 February 2020, in a general