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
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 pharmacetics database and categorised as compatible, incompatible, uncertain or none. DI were defined as incompatibility or uncertainty about the compatibility between at least two simultaneously 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

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