64 prescriptions a month and 59 were appraised by the operational multidisciplinary teams. Haematology was the most prescribing unit (49.8%). Caspofungin (35%), using the intravenous route, or posaconazole (35%), using the oral route, were the most prescribed antifungals. Indications were probabilistic 35% of the time, prophylactic 34% of the time and documented 30% of the time. Documented infections were mainly invasive candidiasis (57%) and pulmonary aspergillosis (32%). Among the 653 prescriptions, 96 were the subject of a pharmaceutical opinion, mainly for improper dosage (50%) or missing a loading dose (29.2%); 84% of prescriptions were re-evaluated by the infectious diseases specialist. Opinions were mainly about switching molecules (32%) and stopping therapy (28%). A total of 75.8% of prescriptions were successfully updated. Comparing our results with those obtained in 2015 in our hospital, the global conformity of the prescription (indication, molecule choice, posology, treatment length, lack of therapeutic alternatives) was up from 81.5% to 87%.

Conclusion and relevance Implementation of operational multidisciplinary teams helped reduce the number of issues and thus contributed to improvement in the quality of prescriptions.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-057 THERAPEUTIC DRUG MONITORING OF VORICONAZOLE

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Background and importance Voriconazole has shown high interpatient variability in plasma steady state trough concentration (C_{trough}). It presents a narrow therapeutic range, with $C_{trough} < 1 \mu\text{g/mL}$, related to treatment failure, and $> 4 \mu\text{g/mL}$ with toxicity.

Aim and objectives To describe plasma voriconazole concentrations (PVC) in an adult cohort treated in a tertiary university hospital. Also, to identify potential causes of interpatient variability in C_{trough} and to find an association between clinical outcomes and adverse events (AE) with PVC.

Material and methods This was an observational retrospective study with no intervention. All patients with a determination of PVC during 2017 were included. Data were obtained from the electronic medical records.

Results A total of 165 C_{trough} were analysed from 51 patients (60.8% men). Median age and weight were 65.2 years (IQR 54.5–71.3) and 70.0 kg (IQR 62.0–81.0), respectively. Ten patients (19.6%) had a body mass index $> 30 \text{ kg/m}^2$, 6 (11.8%) had a drinking history and 1 patient suffered from liver failure. Voriconazole treatment indication was invasive fungal infection in most patients (80.4%), candidaemia (9.8%) and other (9.8%). Median voriconazole dose was 5.8 mg/kg (IQR 4.9–6.6) and median treatment duration was 140 days (IQR 65–176).

Reasons for treatment discontinuation were cure/negative culture (42.8%), appearance of drug related AE (16.4%), treatment inefficacy (9.1%) and other (30.9%). Co-medication with steroids was present in 71 cases (45.0%) and only one significant drug–drug interaction was reported (rifampin).

Median C_{trough} was $2.4 \mu\text{g/mL}$ (IQR 1.4–3.6). C_{trough} values were $< 1 \mu\text{g/mL}$ in 26 cases (15.8%) and $> 4 \mu\text{g/mL}$ in 34 (20.6%). From these, the dose was adjusted in 10 and 5 cases, respectively, resulting in 66.7% of the time that the next PVC was within the recommended range.

We observed a trend towards higher PVC in patients reporting AE ($p=0.177$) and lower in alcoholic patients ($p=0.053$). Within those cases with a $C_{trough} < 1 \mu\text{g/mL}$, co-treatment with corticosteroids and women showed significantly lower plasma values ($p=0.015$ and $p=0.052$, respectively).

Conclusion and relevance We confirmed high variability in voriconazole C_{trough} in routine clinical practice. Co-treatment with corticosteroids, women and alcoholic patients were factors related to lower C_{trough} values. Thus in these patients, it might be suitable to perform therapeutic voriconazole monitoring in clinical practice to help optimise antifungal treatment.

REFERENCES AND/OR ACKNOWLEDGEMENTS

1. *Int J Clin Pharmacol Ther* 2018;**56**:239–246.

No conflict of interest.

4CPS-058 MANAGEMENT OF THE HOSPITALISED PATIENT WITH FLU

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Background and importance Clinical practice guidelines recommend oseltamivir in hospitalised patients with influenza but its use in clinical practice is limited.

Aim and objectives To determine the criteria for use of oseltamivir in hospitalised patients and to analyse the prescription of concomitant antibiotics.

Material and methods An observational, descriptive, retrospective study was conducted in patients treated with oseltamivir (November 2018–February 2019) in a second level hospital. Electronic medical history was used as the source of information. Variables collected: date of admission/discharge, clinical service, polymerase chain reaction (PCR), age, risk factors, dosing regimen/adjustment, duration of treatment, complications, return to hospital and concomitant antibiotics prescribed. SPSS was used for statistical analysis.

Results Oseltamivir was prescribed in 160 patients, mostly from the internal medicine service (58.1%) and pneumology (22.5%), with an average entry duration of 8 days.

PCR was performed in 111 patients (69.4%) and confirmed the diagnosis in 103 (64.37%), such as flu A. In eight patients with negative PCR, oseltamivir was discontinued. Cases confirmed by age range were: 3 (< 18 years), 31 (18–65 years) and 69 (> 65 years). The most common pathological history was high blood pressure (HTA) (27.7%), dyslipaemia (19.3%), cardiovascular disease (18.5%), lung disease (14.7%), diabetes (10.1%), immunosuppression (6.3%) and chronic kidney disease (CKD) (7.8%). As risk factors, 21.4% were active smokers, 14.6% were obese and there were no pregnant women. Regarding complications, 8.7% required the intensive care unit, 3.9% died and 11.7% returned to hospital.

The most common oseltamivir dosing regimen was 75 mg/12 hours. In 13 patients with CKD, 75% who had a ClCr 10–30 mL/min had the dose adjusted to 30 mg/24 hours. In contrast, 11.11% of patients with ClCr 30–60 mL/min, the dose was adjusted to 30 mg/12 hours. Duration of treatment

in 52% was 5 days. Seventy-three patients received empiric levofloxacin, 67 ceftriaxone, 35 amoxicillin/clavulanic and 11.8% received no antibiotic.

Conclusion and relevance PCR was not performed in all patients suspected of flu virus infection. The population >65 years of age was the most affected by the virus, with HTA and smoking being the main risk factors. Oseltamivir was used at the correct dose, but treatment duration greater than or less than 5 days was not warranted. Adjustment for CKD was not always taken into account. Overuse of antibiotics was confirmed in patients where an antiviral might have been sufficient to treat the influenza.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-059 STRATEGY FOR CHANGE IN ANTIRETROVIRAL THERAPY: LOOKING FOR BETTER RESULTS

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Background and importance In June 2018, our regional HIV working group, in a programme to improve the efficiency and safety of antiretroviral therapy, recommended changing emtricitabine/tenofovir disoproxil fumarate/rilpivirine (E/TDF/R) to emtricitabine/tenofovir alafenamide/rilpivirine (E/TAF/R). Different studies evaluated TDF versus TAF, where TDF was associated with more nephrotoxicity and bone alteration, but effectiveness was similar.

Aim and objectives To evaluate the efficiency and safety of implementation of this strategy.

Material and methods This was a retrospective observational study (June 2018 to March 2019), including all patients treated with E/TDF/R. Collected data were gender, age, duration of treatment and last available analyticals before the change and at least 3 months later: viral load (VL), HIV RNA, CD4+ cell to assess effectiveness; glomerular filtration rate (GFR) and phosphataemia to assess nephrotoxicity; and alkaline phosphatase (AF) to analyse bone alteration. The cost per patient was calculated based on agreed regional prices.

Results Sixty patients were treated with E/TDF/R, 21 women and 39 men, median age 48 years (range 22–82), and all changed to E/TAF/R.

Median duration of treatment was 35 months (range 9–62) with E/TDF/R and 6 months (range 3–8) with E/TAF/R. At the end of the study, 97% of patients continued treatment with E/TAF/R. In all patients VL was undetectable and negative for HIV RNA. Before starting E/TAF/R, median CD4 cell/mL was 851 ± 392.3 , and 856 ± 392.3 in the last evaluation. Three patients (5%) had GFR <50 mL/min and with the change to E/TAF/R, GFR improved to >50 mL/min. Phosphataemia was adequate in all patients. AF was elevated in three patients (5%) but this improved after changing treatment.

Cost saving with the change was €40 per patient/month, and total saving for the study period was €24 000.

Conclusion and relevance Effectiveness was similar with the change. Safety was slightly favourable for E/TAF/R. However, it would have been interesting to evaluate longer use of E/

TAF/R to obtain more conclusive results on the improvement in renal function and to carry out an analysis of bone metabolism with markers of greater sensitivity and specificity. E/TAF/R could be a more cost efficient alternative as it could mean annual savings of up to €28 800.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-060 PRESCRIPTION ANALYSIS OF TENOFOVIR DISOPROXIL FUMARATE AND TENOFOVIR ALAFENAMIDE FUMARATE IN A THIRD LEVEL HOSPITAL

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Background and importance Tenofovir alafenamide (TAF) is a novel tenofovir prodrug, recently entering the market for HIV infections. TAF results in higher intracellular concentrations of the active metabolite tenofovir diphosphate compared with tenofovir disoproxil fumarate (TDF), allowing for much lower doses of TAF versus TDF. This leads to a reduction in the risk of kidney and bone disease, maintaining the same efficacy.

Aim and objectives The aim of the study was to evaluate the prescriptive trend of TDF and TAF based drugs for HIV in hospital and the switch from one formulation to the other.

Material and methods Dispensations, carried out from 1 January 2017 to 30 September 2019, of formulations containing TDF and TAF were extracted. In addition, patient switches from TDF+emtricitabine+elvitegravir+cobicistat (TDF/EMT/ELV/COB) to TAF+emtricitabine+elvitegravir+cobicistat (TAF/EMT/ELV/COB) and from TDF+emtricitabine+rilpivirine (TDF/EMT/RIL) to TAF+emtricitabine+rilpivirine (TAF/EMT/RIL) were analysed. The data collected were divided by year.

Results In 2017, 286 patients used TDF in their treatment regimen for HIV while 62 used TAF based drugs, the percentage prescriptions being 92.5% versus 7.5%, respectively. In 2018, 136 patients were treated with TDF and 223 with TAF, the percentage prescriptions being 34.5% versus 65.5%. In 2019, 44 patients used TDF and 267 TAF, the percentage prescriptions being 9% versus 91%. Eleven of 28 (39%) patients changed from TDF/EMT/ELV/COB to TAF/EMT/ELV/COB in 2017, 41% (7/17) in 2018 and 50% (2/4) in 2019. In 2018, 67% (35/52) switched from TDF/EMT/RIL to TAF/EMT/RIL and 58% (7/12) in 2019. No patient changed from TAF/EMT/ELV/COB or TAF/EMT/RIL to the corresponding TDF based drugs in the 3 year period studied.

Conclusion and relevance It is evident that the reduced toxicity of TAF resulted in a progressive reduction of the use of TDF over time and a further reduction in the future is conceivable. Therefore, it will be important to determine in future works whether only patients with specific conditions receive TDF therapy, such as those with pre-exposure prophylaxis, pregnant patients (data on the use of TAF in this category of patients are still limited) and those with hypercholesterolaemia or hypertriglyceridaemia (TDF has been shown to improve the lipid profile).

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.