

The data collected included patient demographics, diagnosis and antimicrobial prescribed (dose, route, duration), appropriateness of the prescription, recommendations made and its rate of acceptance.

Results Sixty-four patients were included: 65.6% men, mean age 70.2 (SD 17.4) years, 4.6% allergic to beta-lactams and 17.2% from a nursing home. The most common diagnoses were community acquired pneumonia (17.2%), respiratory tract infections (15.6%) and urinary tract infections (15.6%); 84.4% of patients were hospitalised. The empirical antimicrobials most prescribed were meropenem (28.1%), levofloxacin (17.2%) and amoxicillin-clavulanic (15.6%).

In 84.4%, patients were asked for cultures before starting antibiotic therapy. Inappropriate prescriptions according to the protocol accounted for 48.4%. Of these, 45% were excessive (either on spectrum or dose), 32% were insufficient and 22% were given to patients that had no infection.

We made 80 recommendations: 41.0% to continue treatment, 18.6% to discontinue treatment, 18.6% to decrease the spectrum, 13.8% to increase the spectrum, 5.0% to change to the oral route and 2.5% to decrease the dose. The acceptance rate was 93.8%.

Conclusion and relevance Even though a high ratio of prescriptions were considered inappropriate, a large percentage of the recommendations were accepted, which shows that our intervention was well received by the clinical staff. This could be explained by the involvement of a multidisciplinary group and direct interaction with physicians. Such an educational approach might be highly effective in improving future antibiotic prescriptions in the ED.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-055 EVALUATION OF USE, EFFECTIVENESS AND SAFETY OF ISAVUCONAZOL

CA Alonso Peralta*, CM Valencia Soto, A Illaro Uranga, RM Gonzalez Franco, B Rogado Vegas, J Casanova Vázquez, P Del Rio Ortega, M Rioja Carrera, I Aragon Gracia, L Perez-Periáñez Orillo, M Valero Domínguez. *Hospital Universitario Marqués De Valdecilla, Farmacia Hospitalaria, Santander, Spain*

10.1136/ejhp-pharm-2020-eahpconf.156

Background and importance Isavuconazole (ISA) is an authorised antifungal for the treatment of invasive fungal infection (IFI) by *Aspergillus* in adult patients in which amphotericin B is not appropriate.

Aim and objectives To assess the conditions of use and effectiveness of ISA versus voriconazole (VORI) compared with the SECURE pivotal study in a third level hospital, and describe adverse events in the ISA group.

Material and methods An observational, retrospective study was conducted between September 2018 and September 2019. Variables collected were sex, age, type of infection, causative fungus, duration of treatment and immunosuppressive treatment. Clinical response (CR), considered as resolution of symptoms and no need for subsequent antifungals, was used to evaluate the effectiveness of ISA and VORI. For safety, adverse events (AEs) were recorded. Data compilation was carried out through assisted electronic prescription and electronic medical history. Comparison of proportions was made using the χ^2 test (R-commander).

Results During the study period, 32 patients were analysed (10 ISA vs 22 VORI). Median age was 54.5 versus 66.5 years (IR 46.25–60; 58–77.5) and the percentage of men was 90% versus 68%.

IFI tested by cultures occurred in 60% versus 54% of patients. Fungal species detected were (number): *Aspergillus fumigatus* (2 vs 8), *A flavus* (2 vs 0), *A niger* (1 vs 0), *A terreus* (0 vs 2), *A sydowii* (0 vs 1), *Candida lusitanae* (1 vs 0) and *Lichtheimia* (1 vs 0). The rest were diagnosed as probable IFI (positive galactomannan ag test or CT image).

Median duration of treatment was 49 versus 15 days (IR: 14.25–73.5; 11–44.5). CR was achieved in 3 patients (30%) with ISA versus 10 (45%) with VORI ($p=0.4093$). The AEs registered for ISA were liver disorders ($n=3$), phlebitis ($n=1$), diarrhoea ($n=1$) and grade 2 cytopenias ($n=1$). Dose adjustment was required in three patients due to interaction with immunosuppressants.

Conclusion and relevance Among our population, ISA was a relatively effective and safe alternative, without relevant differences compared with VORI in terms of effectiveness, according to the SECURE pivotal study. A larger sample size would be necessary to verify these data.

REFERENCES AND/OR ACKNOWLEDGEMENTS

- Informe de Posicionamiento Terapéutico de isavuconazol (Cresemba) en el tratamiento de la aspergilosis invasora y la mucormicosis (Internet). Disponible en: <https://www.aemps.gob.es/medicamentosUsoHumano/informesPublicos/docs/IPT-isavuconazol-Cresemba-aspergilosis-mucormicosis.pdf>

No conflict of interest.

4CPS-056 PROPER USE OF ANTIFUNGALS: IMPLEMENTATION OF OPERATIONAL MULTIDISCIPLINARY TEAMS DEDICATED TO ANTIFUNGALS

¹P Audureau*, ¹F Meyer, ²A Charmillon, ²S Henard, ^{1,3}B Demore. ¹University Hospital Nancy-Brabois Adults Hospital, Pharmacy Department, Vandoeuvre-Lès-Nancy, France; ²University Hospital Nancy-Brabois Adults Hospital, Infectious and Tropical Diseases Department, Vandoeuvre-Lès-Nancy, France; ³Lorraine University, Ea 4360 Apemac, Nancy, France

10.1136/ejhp-pharm-2020-eahpconf.157

Background and importance There is an urgent need to establish the proper systemic use of antifungals because of drug resistance and a limited therapeutic arsenal. In June 2018, we created two operational multidisciplinary teams, each comprising a pharmacy resident and an infectious diseases specialist. With prescription assistant software and a data gathering document, residents analysed and validated prescriptions daily. They reappraised each case with the infectious diseases specialist once a week.

Aim and objectives To produce a summarised report of the analyses on antifungal prescriptions. This report allowed us to measure the performance of the newly created operational multidisciplinary teams.

Material and methods All antifungal prescriptions given to adults, oral and intravenous, were analysed in a prospective way from 18 June 2018 to 1 March 2019. The data gathered were patient identity, antifungal prescriptions (molecule, start date, posology and administration route), antifungal indication, patient biological check-up, and clinical and biological proofs. For each prescription, we evaluated the relevance of the indication and the overall compliance with the prescription.

Results A total of 653 prescriptions were analysed for this study, relating to 383 patients. On average, residents analysed

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

S Ruiz Boy*, N Socoro-Yuste, C Bastida, D Soy-Muner. *Hospital Clinic, Pharmacy, Barcelona, Spain*

10.1136/ejhpharm-2020-eahpconf.158

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

M Mañes Sevilla*, B Santiago-Gallego, I Soto-Baselga, C Moriel-Sánchez. *Hospital Universitario Mostoles, Pharmacy Department, Móstoles Madrid, Spain*

10.1136/ejhpharm-2020-eahpconf.159

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