4CPS-250 EXPERIENCE OF TECOVIRIMAT AND CIDOFOVIR USE IN A PATIENT WITH MONKEYPOX: A CASE REPORT

[1]L Rodríguez-De Francisco, [1]AB Guisado-Gil, [1]M Mejias-Trueba, [1]L Herrera Hidalgo*, [1]S Lora-Escobar, [2]R Luque-Márquez, [1]MV Gil-Navarro. *[1]Hospital Virgen Del Rocío, Pharmacy Deparment, Seville, Spain; [2]Hospital Virgen Del Rocío, Infectious Diseases Department, Seville, Spain*

10.1136/ejhpharm-2023-eahp.431

Background and Importance Current treatment for Monkeypox's disease (MPXV) is mainly symptomatic. However, in immunocompromised patients, hospitalisation and treatment with antiviral drugs may be necessary. With the recent outbreak of MPXV, new strategies have been proposed.
Aim and Objectives The aim of the study was to describe our clinical experience with tecovirimat and cidofovir in the treatment of MPXV in a patient whose CD4+ lymphocyte level is less than 50 cells/ml.
Material and Methods The effectiveness of tecovirimat-cidofovir was assessed by the evolution of the rash from macule to crusts that dry up and fall off.
Results The patient was a 35-year-old man diagnosed with MPXV who presented skin lesions in the perineal area, extremities, face, trunk and back and severe proctitis. At admission, the patient was diagnosed with HIV (severely immunosuppressed with CD4+ lymphocyte levels of <40 cells/ml), so he was started on antiretroviral treatment (BIC/TAF/TDF). Sexually transmitted infection screening detected Chlamydia trachomatis infection, which was treated with doxycycline. In the context of MPXV proctitis, it was decided to apply for tecovirimat, the antiviral treatment of choice. The dosage for tecovirimat is weight-based, 600 mg was administered every 12 hours for 14 days (30/08/22–12/09/22). Regarding effectiveness, no new lesions were observed and those already present were regressing, except in the perianal area, where the lesions continued to progress. Therefore, it was decided to administer intravenous cidofovir 5 mg/kg twice weekly (09/09/22, 16/09/22). To avoid toxicity, oral probenecid was administered concomitantly: 2 g 3 hours before and 1 g 2 and 8 hours after completing the perfusion, in addition to 0.9% saline solution 1000 ml 1 h before. After the treatment, there was a progression of lesions in the right inguinal region, palpating left inguinal adenopathy and intense involvement of the testicle, groin and perineal area.
Conclusion and Relevance In contrast to previous cases of patients whose CD4+ lymphocyte levels were above 500 cells/ml, the treatment with tecovirimat and cidofovir in this patient did not achieve a satisfactory response due to the continuous appearance of new lesions. The severe immunosuppression could probably explain the aggressive development of the disease.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest

4CPS-252 OPTIMISATION OF ERTAPENEM POSOLOGY IN A CRITICALLY ILL PATIENT BY THERAPEUTIC DRUG MONITORING: A CASE REPORT

[1]A Gracia Moya*, [1]S Garcia Garcia, [1]M Miarons Font, [1]JM Del Rio GUTIERREZ, [1]A Pau Parra, [2]ML Perez Rodriguez, [1]MP Lalueza Broto, [1]MQ Gorgas Torner. *[1]Vall D'hebron Hospital, Hospital Pharmacy, Barcelona, Spain; [2]Vall D'hebron Hospital, Intensive Care Unit, Barcelona, Spain*

10.1136/ejhpharm-2023-eahp.432

Background and Importance Therapeutic drug monitoring (TDM) of ertapenem is recommended in critically ill patients (CIP) to address their variability in exposure because of its time-dependent, highly protein bound and hydrophilic characteristics.
Aim and Objectives To describe efficacy and safety in a CIP after optimising the posology of ertapenem.
Material and Methods A case report in a CIP treated with ertapenem is described. Data were collected from electronic medical records and ertapenem concentrations were measured by high-performance liquid chromatography.
Results A 35-year-old men with a body mass index (BMI) of 32.6kg/m^2 with a surgical wound culture positive for AmpC-producing Klebsiella pneumoniae was started ertapenem 1g q24h (minimum inhibitory concentration (MIC) of 0.38 for Klebsiella). Three days after initiation, ertapenem plasma concentrations were determined. In that moment, his creatinine value was 0.21mg/dL with a glomerular filtration rate (GFR) of 700ml/min by the Cockroft-Gault formula, and his albumin value was 2.9mg/dL. Ertapenem serum concentrations were 1.65mcg/ml (total drug); 0.16mcg/ml of unbound fraction (fu), considering a protein binding of 90%. Fu should be above the MIC, ideally 4 times the MIC (≥1,52 mcg/ml), and fever persisted, so in agreement with the medical team the dosage was optimise to 0.5g q12h considering its time-dependent pharmacokinetics. Two days after posology optimisation, the patient became afebrile, and 6 days after being with the new regimen, blood concentrations were remeasured resulting in 6.97mcg/mL, and a fu of 0.69 mcg/mL, which is 1.8 times the MIC. Despite not having reached fu of 4 times the MIC, given that the patient remained afebrile after dose optimisation and as a precaution for not reaching toxic concentrations due to an increase in the total daily dose, the 0.5g q12h dosage was maintained for another week, when the infection was solved and the antibiotic discontinued.

No adverse effects related to ertapenem were reported.

Conclusion and Relevance The optimisation of ertapenem posology, changing the frequency without increasing the total daily dose, allowed increasing ertapenem concentrations and improved the clinical outcome of a CIP with augmented renal clearance, low albumin and high BMI, characteristics that may lower ertapenem concentrations, without decreasing the safety of the drug.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest

4CPS-256 ENHANCING THE SAFETY OF INJECTABLE CYTOTOXIC CHEMOTHERAPY AT A TERTIARY CARE HOSPITAL: A RETROSPECTIVE ANALYSIS OF PHARMACISTS' INTERVENTIONS IN CHEMOTHERAPY PREPARATION SERVICES

A Taqi*, A Al-Jabri, K Parveiz, M Al Balushi. *Sultan Qaboos University Hospital, Pharmacy, Muscat, Oman*

10.1136/ejhpharm-2023-eahp.433

Background and Importance Cytotoxic chemotherapeutic agents are classified as high alert medications according health accreditation standards. Detection and resolving of drug related problems (DRP) in chemotherapy prescriptions was associated with overall positive clinical and economic impact in international studies.

Aim and Objectives to describe the economic and clinical impact of interventions performed by pharmacists in the chemotherapy preparation unit at Sultan Qaboos University Hospital (SQUH).

Material and Methods This was a retrospective analysis of pharmacists' interventions on injectable chemotherapy orders between January and December 2021. At SQUH, chemotherapy including biologicals/targeted therapies are centrally prepared within the pharmacy. SQUH is a tertiary care multispeciality hospital in Oman. Chemotherapy prescriptions were routinely verified by trained pharmacists against set treatment protocols and in accordance to patients' clinical and laboratory parameters prior to preparation/mixing. Consequently, a proportion of prescriptions was withheld on the day and differed to another subject to patients' conditions. The direct cost reduction of unprepared doses was calculated.

The remaining prescriptions were screened for any DRP prior to mixing/preparation and PI were then documented on a specific form that was incorporated into the electronic patient record. Each intervention was then graded according to predefined criteria as death, major, moderate and minor according to the associated potential harm prevented.

Results A total of 9,515 orders were received in chemotherapy preparation unit including 18,408 individual injectable medications prescriptions, for 1,096 patients during 2021. A total of 4,440 interventions were performed on the individual medication prescriptions representing 24.1% of total orders. Prior to mixing, 4,069 orders (22.1%of total) were differed and the estimated potential direct cost reduction from the unprepared doses was around 1,000,000 OMR (2,000,000 €). A total of 303 PI were documented and 96% of them were accepted by the prescriber. The most common type of PI was dose adjustment (37.0%) followed by omission (17.2%) and wrong cycle (13.3%). PI prevented death in 1.6% while it prevented a major harm in 3.8%, moderate in 41.0%, minor in 3.0% and improved a suboptimal standard of care in 33.1% of cases.

Conclusion and Relevance Chemotherapy order verification and pharmacists' interventions have minimised potential harm associated with cytotoxic chemotherapy regimens and resulted in considerable cost saving.

REFERENCES AND/OR ACKNOWLEDGEMENTS

https://www.ismp.org/recommendations/high-alert-medications-acute-list
https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-020-4963-7#:~:text=Pharmacists%20play%20a%20key%20role,proposing%20pharmacist%20interventions%20(PI)

Conflict of Interest No conflict of interest

4CPS-260 PERSISTENCE, SAFETY AND ASSOCIATED LYMPHOPENIA OF DIMETHYL FUMARATE IN RELAPSING REMITTING MULTIPLE SCLEROSIS, REAL WORLD DATA

S Herrera Carranza*, P Sanmartin Fenollera, S Adeva Antona, M Prada Bou, C Sanz Sánchez, I Salvador Llana, M Pérez Encinas. *Hospital Universitario Fundación Alcorcón, Hospital Pharmacy, Alcorcón, Spain*

10.1136/ejhpharm-2023-eahp.434

Background and Importance Dimethyl fumarate(DMF) is a hospital dispensing drug indicated for the treatment of relapsing remitting multiple sclerosis(RRMS). Lymphopenia is a frequent adverse event(AE), eventhough it is not an extensive discontinuation cause.

Aim and Objectives To analyse the persistence of dimethyl fumarate and reason of discontinuations. To describe the toxicity of the treatment, focusing on lymphopenia.

Material and Methods Observational, retrospective study of RRMS patients who started treatment with DMF between August-15 and October-2020. They were followed up from the start until August-2022, follow-up of lymphopenia was 22 months. Variables collected: sex, age, previous treatments, date and reason for discontinuation, type of dose-escalation(our standard is 0–0-120mgx7 days, 120–0-120x7,120–0-240x7,240–0-240 onwards), AE and quarterly(± 2 month) lymphocyte levels (classified according to Common Terminology Criteria for AE). Statistics analysed with SPSSv.20.

Results 94 patients were analysed, 68.1%(64/94) female; mean age at baseline is 40.3 years (SD=10.1). Mean EDSS (n=82) 2(0–6,5). No difference in discontinuation according to sex(p=0.385), age (p=0.761) or EDSS (p=0.828). 79.8% (75/94) patients were previously treated with disease modifying therapies. 48.8% (44/94) patients discontinued treatment: AE-47.7% (21/44) (lymphopenia-13.6% (6/44), disease progression-31.8% (14/44), patient's choice-18.2%(8/44), pregnancy planning-11.4% (5/44). 7.4% (7/94) follow-up losses.

Median persistence was 61.6 months (IC95%: 36.9–86.2). Persistence at 6 months was 93.6%, 88.3% at 1 year, 76.4% at 2 years and 56.3% at 5 years. There were 10.6% (10/94) restarts and 13.8% (13/94) patients required slower than our standard dose-escalation.

52.7% (39/74) pretreated patients discontinued vs. 25.0% (5/20) naïve (p=0.028). No difference in persistence (p=0.178).

85.1%(80/94) patients experienced any EA: gastrointestinal-62.5%/50/80), vascular (flushing, heat, hypersensitivity, reddening) -52.2 (42/80), pruritus-28.8% (23/80), other EA-48.8% (44/94).

36.2% (34/94) patients developed lymphopenia; grade (G) 1–34.3%, G2–60.0%, G3–5.7%. At follow-up ending, 14 patients continued lymphopenic: 7.1% (1/14) since beginning, 28.6% (4/14) since 3th month; 28.6% (4/14) since 6th; 7.1% (1/14) since 9th, same since 12th and 15th; 14.3% (2/14) since 18th.

Conclusion and Relevance In our hospital, the largest number of DMF discontinuations are due to intolerance; gastrointestinal toxicities mostly observed. Despite the higher discontinuation in no-naive, persistence isn't different.

Lymphopenia appears in similar percentage to observed in clinical trials. As described in these, real-life data on lymphocyte levels may decrease during the first year of treatment, but stabilise after a few months, recovering normal levels most of patients

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest