3PC-037 LIQUID CHROMATOGRAPHY MASS SPECTROMETRY ANALYSIS OF DOXORUBICIN AND EPIRUBICIN AFTER FREEZING

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Background and Importance The chemical-physical stability, reported among the technical characteristics of the drugs, indicates the parameters to be respected for the safety use of the preparations but often the conditions of storage of the drugs can undergo significant variations. The stability data reported by the manufacturers are often limited while in clinical practice it is necessary to extend the conditions of use and the validity times of the preparations. In reality, it may happen that drugs are transported, stored and used in temperature conditions other than those indicated by the manufacturer without, however, having sufficient data on safety and stability for use outside the certified conditions.
Aim and Objectives The objective of the analysis performed is to evaluate the chemical and physical stability of doxorubicin and epirubicin after being stored in the freezer.
Material and Methods The formulations of doxorubicin and epirubicin stored in the freezer for a period of time exceeding 48h were analysed. The drug solutions were thawed at room temperature and stored in the refrigerator until the time of the chemical-physical analysis. For analysis 10 microliters were subsequently diluted from each vial and injected into LC QTOF MS(n=4).
Results Data obtained from the analysis carried out with a mass chromatographic technique highlighted the chemical and physical stability of the drugs analysed. The measured concentration of doxorubicin for the overrange sample was 1.995 ± 0.005 mg/ml while for the external doxorubicin standard was 1.996 ± 0.008 mg/ml. Some trend was observed for epirubicin, 2.009 ± 0.007 mg/ml versus 2.005 ± 0.005 mg/ml for the overrange sample.
Conclusion and Relevance The analysis showed the chemical-physical stability of the compounds studied allowing their use even outside the storage conditions indicated in the technical data sheet. The results showed that there were no statistically significant differences in the concentration of over range doxorubicin and epirubicin samples even after accidental freezing. This consists in a reduction of drug waste in real conditions. An easy access to mass spectrometry analytical platform may allow the evaluation of drug stability, redefining the chemical-physical stability with certified data.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest

Section 4: Clinical pharmacy services

4CPS-002 EFFECTIVENESS AND SAFETY OF MONOCLONAL ANTIBODIES FOR MIGRAINE PREVENTION AFTER TWO AND A HALF YEARS OF CLINICAL EXPERIENCE

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Background and Importance Erenumab, galcanezumab and fremanezumab were approved in 2019 for migraine crisis prevention. Efficacy and safety were demonstrated in three-months lasting clinical trials. At present, long-term effectiveness and safety can be analysed.
Aim and Objectives To evaluate the effectiveness and safety of monoclonal antibodies (mAb) utilised in migraine after two-and-a-half years of clinical use.
Material and Methods Prospective, observational study conducted in a tertiary hospital (December 2019 to June 2022). Data were obtained from patients' medical records (approved by our Ethics Committee).

Effectiveness and tolerance are evaluated 3 months after initiation and if it is effective and well tolerated it is maintained up to 12 months. Response is defined as a decrease in headache and/or migraine days per month ≥50% compared to baseline and/or a significant improvement in quality of life (measured by HIT-6 and MIDAS scales). If partial response (PR) (decrease ≤50%) or adverse effects (AE) another mAb can be employed with different mechanism of action. If lack of response (LR) (decrease ≤25%) treatment is suspended. If response is achieved during the last months, the mAb can be maintained for another year.
Results 253 patients initiated treatment with a mAb. 69% (n:175) completed 12 months of treatment with effectiveness (responders) and 31% (n:78) stopped at third-month evaluation (PR/LR patients and AE-suffering patients), 42 of which changed to a second mAb. Ending reasons were: PR/LR (n:52), PR/LR and AE (n:9), AE (n:8) and others not related to the treatment (n:9).

After completing 12 months, 140 patients stopped the treatment; 25 maintained it for another treatment course, some of which have already started a third course (median duration: 23 [17-37]), and 10 switched to a second mAb.

Regarding safety, 33% (n:83) of patients reported at least one AE during the treatment with the first and/or second mAb, being the reason for discontinuation in 7% (n:17) of patients (due to vertigo and constipation, mainly). Most frequent AE were vertigo/dizziness (17%, n:45), constipation (13%, n:33) and skin rashes after injection (4%, n:11).
Conclusion and Relevance Anti-CGRP mAb are effective and safe treatments that improve migraine suffering patients' quality of life. A significant percentage of patients completes the treatment course and only 7% of patients discontinues the mAb due to intolerance.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest

4CPS-003 EXPERIENCES WITH A BEST POSSIBLE MEDICATION HISTORY (BPMH) CONDUCTED BY PHARMACY STUDENTS IN THE HOSPITAL SETTING: A SCOPING REVIEW

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Background and Importance Improvement of patient safety at transition of care points is a key strategic aim of the 3rd WHO Global Patient Safety Challenge.[1] Medication reconciliation on admission into hospital increases patient safety by reducing medication errors and adverse events and has been shown to reduce hospital readmissions.[2] Collection of an

accurate best possible medication history (BPMH) is the first step. This is often resource intensive. Final year pharmacy students are now being assigned to obtain BPMHs, as a cost-effective alternative.

Aim and Objectives The aim of this scoping review was to determine the experiences with a best possible medication history (BPMH) conducted by pharmacy students in the hospital setting.

Material and Methods A scoping review was conducted involving PubMed, PubPharm, LIVIVO and Web of Science (2010-2021) including original studies and systematic reviews and their reference lists. Only papers investigating pharmacy students BPMH compared to other healthcare professionals in hospital practice were included. Two independent reviewers screened titles, abstracts and full text articles and completed data extraction with discrepancies being verified by a third. Data charting was used to identify variables corresponding to the research question. Reporting was completed in accordance with PRISMA-ScR.

Results Out of 235 papers, 18 papers met the inclusion criteria. Australia (n=1); Canada (n=1) and the USA (n=16) included a total of 7293 patients. Pharmacy students use more information resources (77,6%; n=972) compared to pharmacy technicians (58,4%; n=743); identified more prescription/non-prescriptions drugs (n=10,2) compared to nurses (n=6,8) and medics (n=7,1); make fewer mistakes identifying allergies/intolerances (n=6) compared to nurses (n=27) and reduced the 30-day re-admission rate (0,6%).

Conclusion and Relevance Pharmacy students are able to effectively contribute to patient safety by carrying out very detailed best possible medication histories, offering an economical alternative to technicians, nurses, pharmacists and medical healthcare professionals. In addition to the benefits to the healthcare system this offers additional opportunities for education/interdisciplinary training between pharmacy and medical/nursing students.

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4CPS-004 TRENDS IN TREATMENTS DURING COVID-19 PANDEMIC IN A UNIVERSITY TERTIARY HOSPITAL

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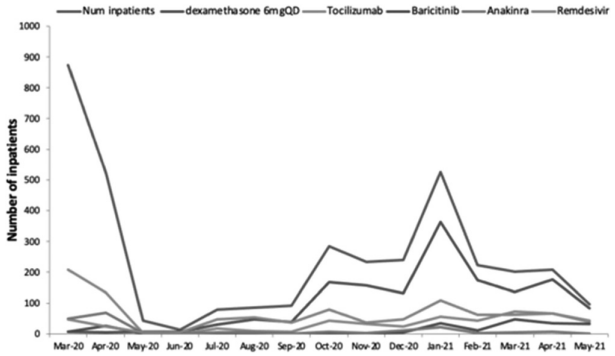
Background and Importance Pharmacotherapeutic management of SARS-CoV-2 infection from the beginning of COVID-19 pandemic to now has evolved in accordance with research and clinical experience, improving treatments and thus clinical outcomes.

Aim and Objectives Our aim is to analyse the changes in the epidemiology and prevalence of use of the different treatments used against COVID-19 and its clinical outcomes throughout the pandemic (from March 2020 to May 2021) in a retrospective unicentre study. We present the data of a university tertiary hospital.

Material and Methods We identified all COVID-19 patients admitted to our hospital >48h through the electronic medical records (SAP Medication®). We evaluated demographic data (age and sex), clinical features (number of admissions/month in ICU or regular wards, mean length of stay and deaths including those <48h) as well as monthly drug consumption of remdesivir, hydroxychloroquine, lopinavir/ritonavir, beta-interferon, tocilizumab, baricitinib, anakinra, corticoids (dexamethasone 6 mg/day and >20 mg/day, methylprednisolone >40 mg/day, prednisone >30 mg/day, hydrocortisone>100 mg/day) and antibiotics.

Results A total of 4406 patients with SARS-CoV-2 infection were admitted of which 3723 met the inclusion criteria. The median age was 66 years, with higher percentage of men (59%). The number of patients admitted to ICU, semi critical care or a regular ward was, respectively 20%, 5,3% and 74,7%. The percentage of deaths after the large peak of mortality (15,2%) in March progressively decreased to 7,7% in the first trimester 2021. The median length of stay for ICU/semi critical care or regular care was 26,2 and 8,7 days. Trends in monthly use of the most frequent drugs are shown in the figure below. More than 80% of inpatients took lopinavir/ritonavir and hydroxychloroquine at the beginning, but consumption was drastically reduced after. The use of beta interferon was anecdotical after first months. The most used antimicrobials were ceftriaxone (45,5%) and azithromycin (34,9%), followed by levofloxacin (8,9%), amoxicillin/clavulanate (7,1%) and ceftaroline (6,0%).



Abstract 4CPS-004 Figure 1

Conclusion and Relevance The use of drugs during the pandemic of COVID-19 has shown a clear evolution over months towards more standardised treatments, with remdesivir as antiviral and dexamethasone, tocilizumab and baricitinib standing out as anti-inflammatory drugs in our centre. Homogenisation and standardisation of COVID-19 treatments have been managed as a reflection of the scientific evidence accumulated throughout the pandemic.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest