high. Detection of the omission of chronic treatments was the most frequent pharmacists' interventions recorded.

REFERENCES AND/OR ACKNOWLEDGEMENTS

None.

No conflict of interest.

4CPS-200 USE OF PROHEMOSTATIC DRUGS IN MASSIVE HAEMORRHAGE EPISODES

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Background Prohemostatic drugs are those used in the treatment or prevention of the haemorrhagic phenomenon, by stimulating the mechanisms that increase haemostasis or by stopping those that inhibit it endogenously.

In our centre, a massive transfusion protocol (MTP) was approved in November 2014, which included the approach to massive haemorrhage episodes (MHE) according to a decision diagram focused on thromboelastometry.

Purpose To evaluate the use of prohemostatic drugs in patients who suffered an MHE.

Material and methods Retrospective descriptive observational study, including all the patients that suffered an MHE during the year 2016.

The data collected were demographic (sex and age), type of MHE, activation or not of the MTP, drugs used according to the MTP and doses used.

Results MHE were collected in 43 patients during 2016. The median age was 55 (21–84) years; 36.59% were female.

The types of MHE were obstetric 11.63%, surgical 34.88%, digestive bleeding 25.58%, polytraumatic 13.95% and others (haemorrhagic, septic, hypovolemic and haemodynamic shock) 13.96%.

MTP was activated in 36 patients (83.72%). The prescribed prohemostatic drugs were: fibrinogen in 58.14% of patients, tranexamic acid (TXA) in 48.84% and prothrombin complex concentrate (PCC) in 20.94%. Overall, 105 g of fibrinogen, 32.9 g of TXA and 9603 IU of PCC were used.

According to the type of MHE the following prohemostatic drugs were consumed:

- Obstetric: fibrinogen 14 g, PCC 600 IU and TXA 5 g (four, one and three patients respectively).
- Surgical: fibrinogen 64 g, PCC 7800 IU and TXA 13.5 g (11, four and five patients respectively).
- Digestive bleeding: fibrinogen 14 g, PCC 3 IU and TXA 4 g (four, one and two patients respectively).
- Polytraumatic: fibrinogen 7 g, PCC 1200 IU and TXA 5 g (three, one and four patients respectively).
- Others: fibrinogen 2 g (one patient), and TXA 2.4 g (one patient).

Conclusion Surgical haemorrhages were the most frequent type of MHE during the study period.

Fibrinogen was the most used prohemostatic drug in MHE.

The patients who presented a surgical type MHE were the ones who consumed more prohemostatic drugs.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-201 ACCULTURATION OF PRESCRIBERS TO RECOMMENDATIONS ON THE MANAGEMENT OF CLOSTRIDIUM DIFFICILE INFECTIONS TWO YEARS' AFTER AN ANTIMICROBIAL STEWARDSHIP PROGRAMME IN A UNIVERSITY HOSPITAL

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Background According to the ECDC, there are 1 24 000 cases of *Clostridium difficile* infection (CDI) and 3700 attributable deaths per year in Europe. In our hospital, an antimicrobial stewardship programme (ASP) was implemented in 2015 with a multidisciplinary team. This preliminary study showed that only 23% of the prescriptions were initially in agreement with the international recommendations. A 30% rate of CDI relapse was observed.

Purpose The aim of this study was to evaluate the acculturation of prescribers to recommendations on the management of CDI 2 years' after an ASP.

Material and methods From November 2017 to September 2018 an observational study was held in a 1500-bed university hospital. Analysis by the pharmacy of all prescriptions as well as criteria of severity and risk factors of recurrence, were extracted from patients' files and biological laboratory results. In the case of non-compliance with the recommendations of the European Society of Clinical Microbiology and Infectious Diseases (ESCMID), pharmacists intervened within 24 hours after the availability of laboratory results. Ten-day and 8 week follow-up of all patients was implemented to evaluate the recovery and relapse rate.

Results Fifty-one patients were included during this period (median age 59 years; sex ratio M/F=0.88). According to the ESCMID criteria, 78.5% of patients had risk factors of recurrence of those 66.6% of severe comorbidity and 23.5% of immunosuppression. 13.7% of cases had criteria of severity with 25.3% of death at 2 months. Risk factors of recurrence included in 49% of cases antibiotic therapies, 41.2% of proton pump inhibitors and 21.6% of transit inhibitors. This study also shows that 70.6% of prescriptions agreed with the ESCMID recommendations. Fourteen pharmaceutical interventions were realised and revealed 93% prescriber acceptance. Patient follow-up showed 95% of recovery at 10 days and 15% of relapse.

Conclusion This study shows an acculturation of prescribers to recommendations even long after the realisation of ASP. These actions made it possible to reach a good recovery rate and reduce the relapse rate. The multidisciplinary approach and the direct follow-up of prescribers by the pharmacy team is necessary to the success of good management of CDI.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-202 ANTICHOLINERGIC RISK IN CHRONIC COMPLEX PATIENTS

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Background Numerous studies demonstrate the association between the use of anticholinergic medication and cognitive

Abstract 4CPS-203 Table 1

	patient 1/ IMIGLUCERASE	patient 2/ALPHA - TALIGLUCERASE	patient 3/ VELAGLUCERASE	Average	Standard deviation
Drug	€ 107,623.25	€ 79,934.23	€ 262,381.42	€ 149,979.63	€ 98,322.38
Medical devices	€ 323.64	€ 359.60	€ 323.64	€ 335.62	€ 20.76
Paraclinical examinations	€ 166.76	€ 166.76	€ 166.76	€ 166.76	0
Hospitalisation costs	€ 366.79	€ 431.52	€ 366.79	€ 3 99 155	€ 45.77
Annual global cost	€ 108,480.44	€ 80,892.11	€ 263,238.61	€ 150,870.38	€ 98,286.53

impairment, as well as the increase in hospital readmissions, in chronic complex patients.

Purpose The objective of this study was to evaluate the anticholinergic risk in a sample of chronic complex patients and identify the responsible drugs.

Material and methods Prospective, cross-sectional, descriptive and observational study that included chronic complex patients older than 65 years, polymedicated (>5 prescribed drugs) and admitted to an acute hospital in September 2018. The variables registered were: demographic data, prescribed drugs, anticholinergic risk index (AR), Charlson index and degree of preventability of anticholinergic drugs. The data was collected from the electronic medical record during the therapeutic conciliation at admission made by the pharmacist. The Anticholinergic Burden Calculator was used to calculate the AR.

Results Twenty-four patients were included, with a mean age of 83 years (SD: 7). Of these, 16 (67%) were females. The average of the Charlson index was 6.75 (SD: 2.45). These patients were prescribed an average of 13 (SD: 5) drugs and, of these, an average of four (31%) anticholinergic drugs. According to the degree of AR, 11 patients (46%) had a high AR (AR >1), 11 (46%) medium and two (8%) low. The mean AR was 1.07 (SD: 0.81). One-hundred and eight prescriptions of anticholinergic drugs were registered, of which 12 (11%) were benzodiazepines, 12 (12%) antidepressants, five (5%) opioids, 11 (10%) diuretics, three (3%) urinary antispasmodics and 14 (13%) corticoids, among others. Sixty-seven per cent of patients had five or more anticholinergic drugs prescriptions. Based on the START/STOPP criteria, it was estimated that 27 prescriptions (25%) were avoidable in this group of patients.

Conclusion The prevalence of AR was important in the sample of patients. The AR could be avoided or reduced in at least a quarter of the prescriptions. One-third of the prescriptions corresponded to drugs of group N in the ATC classification. It would be interesting to establish selection criteria for patients who can benefit from a pharmaceutical intervention to try to minimise the anticholinergic risk.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Anticholinergic Burden Calculator:
<http://www.anticholinergicscales.es/>
No conflict of interest

4CPS-203 PHARMACOECONOMIC ANALYSIS OF THE MANAGEMENT OF GAUCHER DISEASE IN A PAEDIATRICS HOSPITAL

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Background Gaucher disease is a rare, autosomal recessive genetic disorder caused by a deficiency in the enzymatic activity of glucocerebrosidase. Although enzymatic replacement therapies are present, their high costs are a brake on therapeutic management. The current literature on the assessment of the economic and clinical value of treatment remains insufficient to date.

Purpose Determine the overall average cost of managing Gaucher disease per patient and establish a cost-impact analysis comparing the different treatments.

Material and methods We conducted a prospective, descriptive and analytical study at the paediatrics hospital. The variables for the calculation of the direct costs were collected using a checklist and the cost-benefit analysis was carried out using a questionnaire for the treating doctor, and also on the assessment of haematological and organomegaly parameters, before and during the treatment.

Results The study involved three patients treated for type 1 Gaucher disease, with an average age of 11±3.60 years and an average weight of 28±19.2 kg. The patients used three different treatments and the cost of each treatment is represented in table 1 below:

The average annual direct cost per patient of the management of Gaucher disease in our study was estimated at €186,363.30 ±€95,156.05/year.

Conclusion The lowest cost was of the alpha-taliglucerase treatment. The average direct cost has as a predominant expenditure the treatment of the cause (€149,622.38) which corresponds to 80% of the total cost. Clinically, good efficacy on haematological parameters and organomegaly was observed for the three patients as well as an improvement in the quality of life of the patients whose diagnosis was made early.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.

4CPS-204 MEDICATION RECONCILIATION AND PHARMACOTHERAPEUTIC REVIEW IN AN ORTHOGERIATRIC UNIT OF A CENTRAL HOSPITAL

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Background Medication reconciliation and pharmacotherapeutic review reduces drug-related problems and improves patient