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 interes

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

Thank you to the team hospital.

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

safety. It promotes compliance and contributes to the prevention of errors, by systematically analysing patient's medication and detecting discrepancies. Discrepancy is defined as the difference between the patient's usual medication and the one that is prescribed at each moment of care transition.

Purpose Characterisation of the medication reconciliation and pharmacotherapeutic review performed by the clinical pharmacist at the orthogeriatric unit of a central hospital over a 12 month period.

Material and methods Retrospective, observational study conducted from January to December 2017. Medication reconciliation and pharmaceutical review were performed at the hospitalised patient's admission to the orthogeriatric unit. The Beers and STOPP/START criteria were used to evaluate potentially inappropriate medications in older people. Pharmaceutical intervention was performed when the discrepancies were not according to the bibliography, and their acceptance by the clinical team was evaluated. Data was recorded and treated in Excel version 15.3.3.

Results Thirty-one patients were included with a median age of 83 years. Of those, 68% were female. A total of 249 drugs were analysed (7.7/patient) and 146 discrepancies identified (4.7 discrepancy/patient). The most common discrepancy was 'omission' (n=120; 82%). The pharmacotherapeutic group with the greatest number of discrepancies was the 'cardiovascular system' (n=35; 30%) and the largest number of interventions (29%) was also in this group. A total of 80 interventions were performed and the most frequent was 'drug introduction' (59%). The pharmaceutical interventions acceptance level was 78%.

Conclusion Medication reconciliation and pharmacotherapeutic review in the orthogeriatric unit improved pharmaceutical and physician communication and cooperation, allowing the optimisation of this patient's therapy.

REFERENCE AND/OR ACKNOWLEDGEMENTS

Elizabeth A, Janne K, *et al*. Medication reconciliation of patients with hip fracture by clinical pharmacists.

No conflict of interest.

4CPS-205 ENOXAPARIN DOSE ADJUSTMENT IN THE ELDERLY – THE INTERVENTION OF THE CLINICAL PHARMACIST

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Background Enoxaparin dose adjustment in the elderly is essential because its bioaccumulation may cause bleeding events. The high number of elderly protamine administrations in our hospital raised our awareness. The evidence on pharmaceutical interventions (PI) supporting dose adjustment of enoxaparin is almost nonexistent.

Purpose Assessing the need, acceptance and results of PI in the adjustment of enoxaparin doses prescribed to elderly inpatients.

Material and methods Protamine administration retrospective study (January–March 2018) followed by a 2 month prospective longitudinal study (May–June). Prospective study inclusion criteria: inpatients≥65 years (internal medicine ward) on enoxaparin for treatment or thromboprophylaxis with acute kidney injury (AKI) or chronic kidney disease (CKD). Data were collected from electronic patient records. Patients were continuously monitored by calculating creatinine clearance (CrCl) (Cockcroft Gault formula). CrCl <30 ml/min or borderline (30–45 ml/min) led to verbal or electronic PI. Weight adjustments were also considered. The need for protamine use and the occurrence of bleeding events were monitored.

Results In the retrospective study, nine patients (77.9±11.9 years) needed protamine for partial reversal of bleeding events due to enoxaparin, eight of them had CrCl <45 ml/min. In the prospective study were included 35 patients out of 87 (40.2%) (79.9±8.8 years; 54.3% women; 60.0% AKI, 38% CKD; 51.4% on treatment doses, 48.6% on thromboprophylaxis). On average, pharmacists monitored CrCl during 7.4 days out of 9.2 days of treatment. There were 17 PI in 12 patients (75% CKD): seven dose adjustments by CrCl <30 ml/min; six dose adjustments to weight; and four alerts by borderline CrCl. The acceptance rate was 70.6%. The physicians took 1.1 days to electronically adjust the prescribed dose. No protamine was administered during this period. In patients whose PI were accepted, there were not any bleeding events. Major haematomas were observed in two patients whose PI were not accepted. Patients with borderline CrCl presented minor haematomas. Although guidelines indicated dose adjustments only for CrCl <30 ml/min, there is a growing concern about the unadjusted doses' safety in patients with CrCl 30–50 ml/min.

Conclusion PI were relevant in avoiding bleeding events in a growing geriatric population. Collaboration between the clinical pharmacist and medical staff brings improvements in elderly pharmacotherapy.

REFERENCE AND/OR ACKNOWLEDGEMENTS

Shaikh SA, Regal RE. Dosing of enoxaparin in renal impairment. PT 2017;42:245–9.

No conflict of interest.

4CPS-206 IMPACT OF PHARMACEUTICAL INTERVENTIONS IN PARENTERAL NUTRITION

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Background The role of pharmacists in parenteral nutrition (PN) management differs between hospitals. In our case, pharmacists are not limited to PN compounding and distribution. For instance, for more than 20 years, pharmacists have been supporting the calculation of patients' basal metabolism (PBM) and developed protocols for a gradual introduction of PN in order to avoid refeeding syndrome (RS).

Purpose To evaluate pharmaceutical interventions (PI) in PN, its acceptance and impact.

Material and methods Prospective study including patients on PN, March to September 2018. Data were collected through communication with nurses/physicians or from electronic records. Prescriptions were electronically validated daily. PBM was calculated by the Harris–Benedict formula. All interventions and relevant clinical data were recorded and analysed.

Results The study included 69 patients (65.5±16.6 years; 68.1% males). There were 66 PI in 126 prescriptions (52.3%), with an acceptance rate of 90.2%. PBM and rate infusion calculation represented 54.5% of all PI. Suggestions for special protocols due to the high risk of RS were 3.3% of PI. During the study, only one patient developed RS. The main prescription error was incorrect NP bag selection so consequently, 18.4% of PI were prescribed bag adjustments.