

prescription, the number of phone calls made by pharmacists to physicians and the number of changes made after these phone calls.

**Results** In 2011, prescriptions were re-evaluated in 69% of the cases, with a statistically significant increase ( $p < 0.01$ ) between 2010 and 2011. Compliance with the AR was 75%, CR was 86%, the PR was 72% and the relevance of the prescription reached 70%. Compliance with these last criteria increased in 2010, but decreased again in 2011. 15% of the prescriptions required a phone call, of which 47% were followed by a change in the prescription.

**Conclusions** The continuation of ATB treatment requires re-evaluation according to the antibiogram or the clinical evolution. The improvements achieved in 2010 in prescription conformity and in the proper use of ATBs as last resort can be attributed to the distribution of the guide to proper use of anti-infectious drugs and changes in the presentation of prescriptions. Nevertheless, the significant decrease in 2011 requires physicians who are prolific prescribers to be sensitised. The active involvement of pharmacists in the anti-infectious drugs committee contributes to promoting the proper use of ATBs. Pharmacists called less than last year but their phone calls were more targeted and relevant.

No conflict of interest.

#### DOI-008 ANALYSIS OF THE USE OF CARBOXYMALTOSE IRON IN A UNIVERSITY HOSPITAL

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**Background** Recently the use of IV carboxymaltose iron at doses of 500–1000 mg has increased in our hospital, even though it is not included in the formulary and it should be only used to avoid blood transfusions.

**Purpose** To evaluate the use of carboxymaltose iron in a university hospital.

**Materials and Methods** A longitudinal, descriptive study was carried out in patients treated with iron carboxymaltose from January 2011 to June 2012 in a university hospital. Data was collected from special orders of non-formulary drugs. Variables recorded: sex, age, prescribing service, indication, haemoglobin (Hb) prior to and after the administration of iron, dose of iron and number of administrations in each patient. Safety was also considered by analysing any adverse effects (AEs) reported to the Pharmacy Department.

**Results** 85 patients were included (60.0% female; median age 50.1 [SD:19.2]). Prescribing services were: Gynaecology and Obstetrics (30.6%), Haematology (29.4%), Nephrology (17.6%), Digestive (12.9%) and others (9.5%). Main indications were: anaemia secondary to chronic kidney disease (CKD) (20.0%), postpartum anaemia (17.6%), undetermined anaemia (14.1%), iron deficiency anaemia (12.9%), gastrointestinal bleeding (8.2%), post-surgical anaemia (8.2%), pre-surgical anaemia (5.9%), others (10.7%) and unspecified indication (2.4%). Mean Hb prior to the iron administration was 9.5 (SD = 2.0) g/dl and 11.5 (SD = 1.7) g/dl after the treatment. Mean dose of carboxymaltose iron used was 754 mg (SD = 251) mg. 71.8% patients received a single iron dose during the study period, 14.1% received two administrations, 5.9% received three administrations and 8.3% received four or more administrations. No AEs associated with the drug were reported to the Pharmacy Department.

**Conclusions** The main uses of carboxymaltose iron were anaemia secondary to CKD and postpartum anaemia. A third of the prescriptions corresponded to surgical patients. However, 16.5% orders specified neither the indication nor the type of anaemia. Our data has shown effectiveness and safety in the use of carboxymaltose iron.

No conflict of interest.

#### DOI-009 ANALYSIS OF THE USE OF ERYTHROPOIESIS-STIMULATING AGENTS IN A UNIVERSITY HOSPITAL

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**Background** The use of erythropoiesis-stimulating agents (ESA) in the treatment of anaemia due to chronic kidney disease (CKD) is highly variable regarding patient characteristics and doses, including the equivalence among ESAs stated in the label product.

**Purpose** To evaluate the use of ESAs for anaemia due to CKD in a university hospital.

**Materials and Methods** A descriptive, transversal study was performed in patients treated with ESAs for anaemia secondary to CKD in a university hospital over a month. The principle variable was monthly dose of ESA. Secondary aims were to assess: efficacy (defined in terms of haemoglobin levels [Hb]) and safety (defined in terms of percentage of patients with Hb >13 g/dl). Variables collected were: demographic characteristics, ESA type and dose, prescribing Service, Hb, serum creatinine (Cr), C-reactive protein, albumin, ferritin, transferrin saturation index, folate, vitamin B12 and parathyroid hormone (PTH).

**Results** 333 patients were included (52.6% female; median age 75.2 years). 69.1% patients were on pre-dialysis, 27.6% on haemodialysis and 3.3% on peritoneal dialysis. The prescription profile was: 23.4% epoetin, 41.4% darbepoetin  $\alpha$  and 35.1% CERA. 97.0% prescriptions from Nephrology Service. Median [p25, p75] dose/month was: epoetin (12857 [8571, 25714] IU), darbepoetin  $\alpha$  (86 [43, 129] mcg), CERA (75 [50, 100] mcg). Hb levels: epoetin (11.9 [11.3, 12.5] g/dl), darbepoetin  $\alpha$  (11.9 [11.1, 12.8] g/dl), CERA (12.1 [11.0, 12.8] g/dl);  $p = 0.860$ . Patients with Hb > 13 g/dl: 11.5% epoetin, 19.6% darbepoetin  $\alpha$ , 22.2% CERA;  $p = 0.639$ . Patients treated with CERA had more favourable levels of Cr, albumin and PTH than those treated with epoetin and darbepoetin  $\alpha$  ( $p < 0.05$ ).

**Conclusions** Efficacy and safety were similar for different types of ESAs. CERA dose was lower than the recommended equivalence stated in the label product for the doses of epoetin and darbepoetin  $\alpha$  obtained, although patients treated with CERA had a better kidney function.

No conflict of interest.

#### DOI-010 ANALYSIS OF THE USE OF FINGOLIMOD IN PATIENTS WITH MULTIPLE SCLEROSIS IN A UNIVERSITY HOSPITAL

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**Background** Multiple Sclerosis (MS) is a chronic, inflammatory and degenerative disease, which affects the Central Nervous System [1].

Fingolimod (FTY) is a medicine indicated in the treatment of MS patients with active exacerbation/remitting episodes. Being an expensive, innovative treatment it has been the subject of careful monitoring.

**Purpose** To evaluate the use of FTY between May 2011 and September 2012. To evaluate the benefits in reducing disease progression.

**Materials and Methods** Retrospective analysis of FTY use in MS patients in outpatient care, followed in Demyelinating Diseases Consultation. The number of outbreaks and Kurtzke Expanded Disability Status Scale (EDSS) scores, blood pressure and heart rate were examined using a pharmacy database and patients' medical records.