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GAZYVARO™ (obinutuzumab, GA101) The only antibody with proven superiority vs. MabThera® (rituximab) in first-line CLL

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  - Offers a manageable tolerability profile

References:

Prescribing information can be found overleaf
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Clinical pharmacy

**IMPACT OF A PHARMACEUTICAL CARE PROGRAMME FOCUSED ON SOLID ORGAN TRANSPLANT PATIENTS**


10.1136/ejhpharm-2015-000639.1

**Background** Patient and organ survival is dependent on the use of immunosuppressant drugs. The doses are reduced several months after the surgery to low maintenance phase levels. Treatment is complex and requires drug treatment monitoring.

**Purpose** To analyse the impact of a Pharmaceutical Care Programme focused on solid organ transplant patients for the prevention and correction of drug-related problems (DRPs). DRPs include medication errors in the process of prescribing, dispensing or administering a drug.

**Material and methods** Study design: retrospective observational study. Sample: 222 solid organ transplant patients: 94 kidney (9 with pancreas), 31 lung, 86 liver and 19 heart. The IASER method (identify, act, monitor, evaluate and results) was used as a tool to analyse and categorise the DRPs. Variables: number and type of DRP, drugs, recommended actions, acceptance and cost savings (acquisition drug cost, preparation and administration time cost, GRD cost, etc.).

**Results** 125 DRPs were detected in 88 patients (0.5 problem/solid organ transplant patient). 60.8% of the patients were males and the average age was 53 years (7–86). Identified by validation (71.2%) and analytical parameters (24.0%). 41.6% of DRPs reached the patient. The main problems were over dosage (24%) in kidney transplant and (8%) in liver transplant patients, the need for additional treatment (12%) in lung transplant and (1.6%) in heart transplant patients. The DRPs were categorised into safety (45.6%), indication (33.6%), effectiveness (18.4%) and adherence (2.4%). The therapeutic groups involved were mainly antibiotics (50%) and immunosuppressants (26%). 81.6% of the actions were accepted by physicians. 72% were relevant to improving patient care. The financial impact was €69,826/year saved (€38,123/year in kidney transplant, €19,106/year in lung transplant, €9,658/year in liver transplant and €2,939/year in heart transplant patients).

**Conclusion** Management of complex treatments requires the involvement of all health professionals. A pharmaceutical care programme based on pharmacotherapeutic monitoring resolved DRPs in solid organ transplant patients. It improved the quality of treatment and saved money.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

No conflict of interest.

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**CLINICAL PHARMACIST INTERVENTIONS ON PARENTERAL NUTRITION APPROPRIATENESS IN A TEACHING HOSPITAL**

G. Meers, K. Noerens*, H. Collier, P. Cortoos. UZ Brussel, Hospital Pharmacy, Brussels, Belgium

10.1136/ejhpharm-2015-000639.3

**Background** Total Parenteral Nutrition (TPN) isn’t always prescribed according to international guidelines: nutritional screening is frequently lacking, the prescribed therapy is not always adapted accordingly and subsequent monitoring is often absent. Our objective was to assess the potential benefit of a clinical pharmacist reviewing prescribed TPN.

**Purpose** Evaluation of the appropriateness of prescribed TPN.

**Material and methods** Setting: tertiary hospital of 1,000 beds. Design: observational prospective study. Population: 90 liver transplant patients during 2013. System: the physician requests the pharmacist consultation via the electronic medical record. The pharmacist delivers the documentation and training to the patient in collaboration with the medical and nursing team. At discharge, the pharmacist gives education about drugs by an informative newsletter and planning schedule. One week after discharge, he telephones the patient to complete a survey on the training level and satisfaction. Variables: patient characteristics, diagnosis, treatment, level of understanding and satisfaction.

**Results** During the study period, 63 patients met the criteria for inclusion in the system. 100% of the consultations were performed and recorded. (Median; range): 57 years (26–69); 80% male; stay: 14 days (8–60); number of diseases contributing to the patient’s condition: 2.5 (1–9); drugs at admission: 5.5 (0–14); drugs at discharge: 10 (5–10). The main reason for transplantation was viral hepatitis: HCV (58%), HBV (14%), alcoholic cirrhosis (30%) and hepatocellular carcinoma associated with previous cases (14%). 31 surveys were obtained with a level of understanding 4.8 out of 5. 90% of patients used the schedule delivered. 58% claimed to know what it was for each drug, 90% were not confused with taking the medicines and 97% did not forget to take their medicines. Finally, 97% said they were satisfied with the information received.

**Conclusion** The participation of a pharmacist in this system can contribute to a better understanding of the treatments by the transplant patient. Electronic consultation has proved a useful and efficient tool for coordinating activities among professionals involved.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

No conflict of interest.
clinical pharmacist. During the intervention period feedback was provided to the physician and dietician in multidisciplinary collaboration. The ESPEN guidelines were taken as golden standard. All data were obtained from the electronic patients files.

**Results** We assessed 272 hospitalisations, 152 pre-interventional (10/2013–01/2014) and 120 post-interventional (02/2014–04/2014). During the latter period an intervention was needed in 83.7% (176 interventions) of the cases. Prevalence of nutritional screening increased from 25.0% to 61.7% (p < 0.001) as did energy requirement calculation (30.9% vs. 67.5%; p < 0.001). Therapy appropriateness increased from 58.8% to 75.8% (p < 0.05). The median duration (6.0 vs. 7.0 days) of the therapy was not significantly reduced (p = 0.36). We avoided the production of at least 81 TPNs on a total of 1172. During the 3 month intervention period an estimated total saving of 20756€ could be obtained.

**Conclusion** The additional monitoring of the appropriateness of TPN by a clinical pharmacist has a positive influence on therapy quality and healthcare costs.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**
1. ESPEN guidelines (http://www.espen.org/education/espen-guidelines)
2. Nutrition support team

No conflict of interest.

**AGE-RELATED MACULAR DEGENERATION: ECONOMIC IMPACT OF IMPLEMENTING TREATMENT GUIDELINES**
1 Bласco-Mасcaro*, G Mercadal-Orfila, R Romero-Del Barco. Hospital Mateu Orfila, Pharmacy, Mahon, Spain

10.1136/ejhpharm-2015-000639.4

**Introduction**

**Background** Drugs for age-related neovascular macular degeneration (AMD) reverse the disease process, usually leading to gains in visual acuity. Ranibizumab (Lucentis) was licensed for AMD in the EU in 2007. Bevacizumab (Avastin), has been widely used globally off-label by splitting up doses licensed for cancer.

**Purpose** To assess the use and cost of intravitreal ranibizumab and bevacizumab, after the implementation of AMD treatment guidelines.

**Methods** A retrospective analysis of the use of both drugs in our hospital from 2007 to 2013 was conducted. At the end of 2009 AMD treatment guidelines were implemented in our hospital: ranibizumab 0.5 mg only can be prescribed after poor response to three monthly injections of bevacizumab 1.25 mg.

**Results** A total of 494 doses of ranibizumab were administered to 107 patients. Bevacizumab was administered to 418 patients with a total of 1325 doses.

Prescriptions for each drug were as follows (from 2007 to 2013):
- Ranibizumab: 23, 147, 179, 32, 27, 25, 61.
- Bevacizumab: 0, 56, 63, 204, 259, 340, 403.

In 2010 after the implementation of the protocol, ranibizumab prescriptions decreased 82.1%, from 179 (2009) to 32 (2010). Bevacizumab prescriptions increased 223.8%, from 63 (2009) to 204 (2010).

Ranibizumab injection average cost was €985.69 per injection. Each bevacizumab injection cost €16.40. Ranibizumab costs in the whole seven year period were €486,929. Bevacizumab costs in the same period were €21,730. Global saving costs for implementing this protocol in our hospital were €1,151,128.

**Conclusions** Our study showed that considerable savings may be obtained by promoting the most cost-effectiveness alternative as first line treatment for AMD. The role of hospital pharmacist was crucial, involving the process of splitting up bevacizumab doses.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

No conflict of interest.
REFERENCES AND/OR ACKNOWLEDGEMENTS

1 Psychiatric Department

No conflict of interest.

**CP-006** PRACTICAL UTILITY OF ITPA GENOTIPATION IN A TERTIARY HOSPITAL

1 R López-Sepúlveda, CM Valencia Soto, C García-Collado, Pi Pérez-Morales, FJ Orantes, N Martínez-Casanova. 2. Resident, Granada, Spain; Hospital Universitario Virgen de las Nieves, Farmacia, Granada, Spain; 3Hospital Huercal Overa, Farmacia, Huercal Overa, Spain; 4Hospital Can Misses, Farmacia, Ibiza, Spain

10.1136/ehjpharm-2015-000639.6

Background Inosine triphosphatase (ITPA) genotyping is used for predicting anaemia in patients with genotype 1 chronic hepatitis C. The AA and CA genotypes have the lowest incidence of anaemia.

Purpose To compare the incidence of anaemia, the reduction of RBV dose and the use of darbepoetin in patients treated with boceprevir or telaprevir before and after the introduction of ITPA genotyping in a tertiary care hospital.

Material and methods Observational, pre-post intervention study using pharmacotherapeutic records of patients treated with telaprevir or boceprevir before and after the introduction of ITPA genotyping. Anaemia was defined as haemoglobin (Hb) <10.5 mg/dL. Baseline characteristics were age, sex, fibroscan, basal Hb, nadir Hb and ITPA genotype. Homogeneity of baseline characteristics was evaluated by the t-test. Comparisons of the incidence of anaemia, the reduction of RBV dose and the use of darbepoetin were made with the independent proportions test.

Results Before genotyping 37 patients were included (27 male, 10 female): Mean fibroscan was 22 kpa, mean basal Hb was 15.6 mg/dL and mean nadir Hb was 10.4 mg/dL. After genotyping 20 patients were included (16 male, 4 female): 18 patients were CC (90%) and two were AC (10%). Mean fibroscan was 11.9 kpa (significantly lower than before genotyping). Mean basal Hb was 16.1 mg/dL and mean nadir Hb was 10.9 mg/dL.

Comparison of before and after results. Reduction in RBV dose: 43.2% vs. 40% (p = n.s.); anaemia: 35.1% vs. 45% (p = n.s.); and treatment with darbepoetin: 32.4% vs. 25% (p = n.s.).

Conclusion Although the reduced use of darbepoetin suggests the practical utility of this resource, a higher percentage of patients experienced anaemia after ITPA genotyping was available. This is possibly because the RBV dose was reduced by less than before genotyping even though 90% of patients were the CC (pro-anaemia) genotype. Greater emphasis should be placed on this resource.

No conflict of interest.

**CP-007** HEPATITIS C VIRUS TREATMENT-RELATED ANAEMIA AND ITS ASSOCIATION WITH HIGHER SUSTAINED VIROLOGIC RESPONSE RATE

1 R López-Sepúlveda, CM García-Collado, Pi Pérez-Morales, CM Valencia, FJ Orantes, N Martínez-Casanova. 1Hospital Universitario Virgen de las Nieves, Pharmacy, Granada, Spain; 2Hospital Huercal Overa, Farmacia, Huercal Overa, Spain; 3Hospital Universitario Virgen de las Nieves, Farmacia, Granada, Spain; 4Hospital Can Misses, Farmacia, Ibiza, Spain

10.1136/ehjpharm-2015-000639.7

Background Some authors have described that among Hepatitis C Virus (HCV) genotype 1-infected patients treated with dual therapy, anaemia has been associated with higher rates of Sustained Virological Response (SVR) as well as the use of erythropoiesis-stimulating agents.

Purpose To investigate the relationships between treatment outcomes, anaemia, and their management with ribavirin dose reduction and/or darbepoetin in patients treated with boceprevir (BOC) or telaprevir (TLV) in a tertiary hospital.

Material and methods Observational study. Data was collected from pharmacotherapeutic records of patients who initiated therapy with TLV or BOC between December’12 and May’13. Anaemia was defined as haemoglobin (Hb) <10.5 mg/dL. Darbepoetin was permitted for anaemic patients after ribavirin dose reduction. The variables were: age, sex, reduction of ribavirin dose and use of darbepoetin.

Results 36 patients were studied (26 men and 10 women). 23 (63.8%) patients were treated with TLV and 13 (36.2%) with BOC.

25 (69.5%) patients reached SVR (16 (69.5%) for TLV and 9 (69.2%) for BOC). 12 of these patients experienced anaemia (48%) (7 (43.8%) for TLV and 5 (55.6%) for BOC). The total number of patients who experienced anaemia was 17 (47.2%) (9 (39.1%) for TLV and 8 (61.5%) for BOC), 16 patients (44.4%) had a reduction in their ribavirin dose (8 (34.8%) for TLV and 8 (61.5%) for BOC) and 12 patients (33.3%) used darbepoetin (6 (26.1%) for TLV and 6 (46.1%) for BOC). 8 of these 12 (66.6%) patients showed SVR, 1 relapsed and 3 abandoned treatment due to adverse events (4 (66.6%) for TLV and 4 (66.6%) for BOC).

Conclusion

1. Among our genotype 1-infected patients treated with BOC or TLV anaemia was not associated with higher rates of SVR.

2. Patients with darbepoetin did not have higher rates of SVR.

3. Percentages of SVR were similar between TLV and BOC.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

**CP-008** A CLINICO-ETHICAL FRAMEWORK FOR MULTIDISCIPLINARY MEDICINES REVIEW IN NURSING HOMES: A HEALTH FOUNDATION SHINE PROJECT

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Background Polypharmacy is common in care home residents. Inappropriate and potentially harmful prescribing in older people has been reported extensively in the literature. Residents in care homes often have little involvement in prescribing decisions involving them. Reviewing and stopping inappropriate medicines is not standard practice across the health economy.

Purpose To develop a method of optimising medicines whilst ensuring that all residents were involved in decisions.

Material and methods Pharmacists undertook a detailed medicines review using primary care records and presented to a multidisciplinary team (MDT) meeting with the care home nurse and general practitioner. The team considered:
To determine predictive factors of pain, fatigue and QoL at T3, a univariate followed by a multivariate ANOVA was used. The time until definitive deterioration was estimated using a Kaplan-Meier method.

Results 68 patients were included in the PI (n = 34) or UC groups (n = 34). Ninety-two percent of the patients returned all the questionnaires. At T3, pain and fatigue were lower in the PI group. Between T1 and T3, QoL remained stable. We identified a significant improvement of 5 points in QoL for patients in the PI group.

Conclusion Whatever the statistical model used, the pharmacist intervention at the beginning of chemotherapy had a less than significant impact on pain and fatigue but nevertheless it was confirmed to have had a significantly positive impact on QoL.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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