

Abstract CPC-045 Table 1

	Boceprevir	Telaprevir
Thrombocytopenia	3	10
Asthenia	2	14
Anaemia	2	10
Skin Lesions		9
Pruritus	1	7
Vitreous Detachment		1
Pancytopenia	1	
Pancreatitis		1

No conflict of interest.

CPC-046 **EPIDEMIOLOGY, SYMPTOMS AND CHEMOTHERAPY OF IMPORTED MALARIA AT MOHAMMED V MILITARY TEACHING HOSPITAL IN RABAT, MOROCCO**

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Background In Morocco, since the neutralisation of the last outbreak of *Plasmodium vivax* in 2004, only imported malaria cases have been recorded, the majority from sub-Saharan Africa. At Mohammed V Military Teaching Hospital in Rabat, patients are mostly military, often called to perform missions in malaria endemic areas.

Purpose To report the incidence, origins, symptoms and treatment of malaria at Mohammed V Military Teaching Hospital.

Materials and Methods A prospective study performed from 1 January 2000 to 15 November 2009. All patients who had travelled to a country where malaria is endemic and diagnosed positive for *Plasmodium* spp in our hospital were included. The data collected concerned the epidemiology, symptoms, diagnosis and treatment of malaria.

Results 145 patients had a thick blood smear positive for malaria parasites. 84% were Moroccan, the sex ratio Male/Female was 19.71 and the age varied from 6 to 60 years with a median of 34 years. Countries at the origin of the infection were classified in zone 3 in 92% of cases. All malaria patients were symptomatic at admission, with often one or more of the following symptoms: fever (99%), chills (57%), sweats (41%), headaches and various pains (80%), vomiting (67%), nausea (44%), anaemia (44%) and thrombopenia (73%). We distinguished 19 cases of severe malaria and 3 cases of probable evolutive visceral malaria unconfirmed by serology.

Plasmodium falciparum was responsible for most cases, alone in 68% of cases and in combination with other *Plasmodium* species in 10% of cases. A diagnosis was made within three months of returning from the endemic malaria area for 97% of cases. The drugs most commonly used for treatment were mefloquine (25%), quinine (17%) and the combination of the two (50%).

Conclusions This study allowed us to better understand the profile of our malaria patients in order to improve their management in our hospital.

No conflict of interest.

CPC-047 **EPILEPSY MANAGEMENT FROM THE CLINICAL PHARMACIST'S POINT OF VIEW AMONG EPILEPSY OUTPATIENTS IN THE EASTERN HUNGARIAN DATABASE**

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Background Epilepsy may need chronic medical treatment throughout life. This is why, besides epileptologists, clinical pharmacists also have an important role in the evaluation of effectiveness, tolerability, side effect, drug interaction, teratogenicity of antiepileptic drugs (AEs).

Purpose To investigate how the cooperation of epileptologists and clinical pharmacists influence compliance and the effect of AEs on the quality of life.

Materials and Methods We analysed 60 parameters of 1845 adult outpatients with epilepsy in the Eastern-Hungarian Database at the Department of Neurology, between 1992–2011. The clinical pharmacist collected and analysed data from 1015 men and 830 women that were related to epilepsy treatment. For statistical analysis the 'STATISTICS for Windows' programme was used.

Results The mean age was 49.3 years. Seventy-seven patients had idiopathic and 1768 symptomatic or cryptogenic epilepsy. During the examination period 1517 patients took antiepileptic treatment: 71% monotherapy, 21% dual therapy and only 8% polytherapy. Thirty-eight percent of the patients were on carbamazepine and 14% valproate monotherapy. Seventeen percent of the patients were seizure-free on levetiracetam, lamotrigine or oxcarbazepine monotherapy at least for one year. The ratio of side effect was 7.6%. Eighty-eight patients gave birth, 70 of whom took AEs during the organogenesis. No minor or major developmental disorders were observed, although there was one spontaneous miscarriage. At the start of the study a surprisingly high proportion of the patients (36.2%) received concomitant treatment affecting the CNS that could also influence the AEs metabolism. After carefully analysing the patient's history and symptoms, we could decrease the use of the co-medication (diazepam, antidepressants, minor and major tranquilisers, alprazolam) to 14.6% of the patients. The compliance was good in 78.7% of the patients.

Conclusions The data of Epilepsy Database analysis may give useful information in clinical practise, not only for epileptologists but clinical pharmacists too. Individually-planned monotherapy decreases the side effects and improves the quality of life in patients with epilepsy.

No conflict of interest.

CPC-048 **ESTABLISHING THE ROLE OF THE PHARMACIST IN AN INPATIENT ANTICOAGULATION MANAGEMENT SERVICE IN BELGIUM**

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Background The complexity of the management of vitamin K antagonist (VKA) treatment has led to the development in many countries of anticoagulant management services (AMS) which provide patient education and good family physician communication in a systematic and coordinated fashion. In Belgium, there is only limited experience in AMS.

Purpose To determine the impact of a pharmacist-provided anticoagulation management programme (AMP) aiming at improving patient education and communication with the family physician.

Materials and Methods This was a prospective cohort study including consecutive inpatients newly initiated on VKA in an urban teaching tertiary care hospital. Patients and general practitioners were interviewed by phone shortly after discharge by using a standardised questionnaire to evaluate the quality of patient education and the quality of discharge reports before (usual care) and after implementation of a pharmacist-provided AMP. The AMP provided structured patient education and a standardised discharge report for family physicians.

Results With usual care, 58% of 26 patients received some form of unstructured education. Analysis of 42 discharge reports showed that duration of treatment, target INR (International Normalized Ratio), in-hospital INR results, scheduling of the next INR measurement and VKA maintenance dose were specified in 7%, 14%, 28%, 52% and 62% of them, respectively. Seventy-nine percent of 33 family physicians received the discharge report and 35% of them judged that it was complete.

With the pharmacist-provided AMP, all patients received structured education. Eighty-nine percent of 75 family physicians received the standardised discharge report and 99% of them judged that it was complete.

Conclusions The implementation of the structured pharmacist-provided AMP improved patient education and family physician communication.

References

1. M.F. Crader, and Co., *Hospital Pharmacy* 2010; Volume 45(8): 618–623.
2. T.J. Bungard, and Co., *Open Medicine* 2009, Volume 3(1): 16–21

No conflict of interest.

CPC-049 EVALUATION OF A STANDARDISED THERAPEUTIC EDUCATION TRAINING SESSION FOR HYPERTENSIVE STROKE PATIENTS

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Background A standardised therapeutic education (TE) intervention was developed in 2009 in the department of Neurology, for hypertensive stroke patients. This training session has been officially authorised (Agence Régionale de Santé) since 2011.

Purpose To assess the effectiveness of the TE training.

Materials and Methods The TE training is for hypertensive patients hospitalised in a stroke unit for a cerebrovascular accident (CVA), and treated with antihypertensive drugs, when they are able to participate. We performed:

- a. an evaluation of the patients' knowledge of hypertension (HT), self-measurement, and adherence to antihypertensive medicines, using a questionnaire (6 short questions) filled in before and after the TE session, during a consultation;
- b. an evaluation of patient satisfaction, with an opinion questionnaire (after the TE session).

Results 67 patients participated in at least one session. a) 18 patients took part in a second session during a consultation, on average 4 months after the first session. The pre- and post-TE questionnaires were compared, and a score calculated, for 11 patients (7 patients excluded). The total post-TE score was significantly improved (34 ± 7 vs. 43 ± 2 ; $p = 0.005$). All items' scores had increased significantly: link between HT and CVA ($P = 0.05$), possibility of treating HT ($P = 0.03$), adaptation to antihypertensive drugs ($P = 0.006$), regular blood pressure measurement ($P = 0.05$). The score about the continuation of antihypertensive treatment was the only one that did not improve significantly. Results for medicines adherence could not be analysed (many patients had no treatment before hospitalisation). Post-TE, more patients carried out regular self-measurement. b) We analysed 40 opinion questionnaires: 94% of patients were completely satisfied with the session (reception, timing, educator open to listening, clarity), 80% felt completely capable of applying what they learned, 83% said they were ready to take part in other sessions.

Conclusions These results are really encouraging, about increased knowledge and patient satisfaction. Space should be made for a second TE session in post-CVA consultations.

No conflict of interest.

CPC-050 EVALUATION OF A UNIFIED INHALATION INSTRUCTIONAL SYSTEM IN COOPERATION WITH PHYSICIANS, HOSPITAL PHARMACISTS AND COMMUNITY PHARMACISTS

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Background The prevalence of asthma and chronic obstructive pulmonary disease (COPD) in Japan is estimated to be approximately three million and five million, respectively, and inhalation has gained widespread use as a long-term treatment modality. Thus, patient education on the purpose of medication and correct inhalation technique is essential for obtaining sufficient therapeutic benefit. In our region, to offer each patient correct inhalation treatment and improve treatment efficacy and quality of life, we prepared unified inhalation guidance documents and developed a system of cooperation between physicians, hospital pharmacists and community pharmacies.

Purpose To assess the benefits and problems of our guidance documents and cooperation system.

Materials and Methods A total of 162 Japanese patients were enrolled for instruction on inhalation treatment from August 2011 to August 2012. We investigated inhalation techniques and learning behaviour based on our unified inhalation guidance documents after patients had received instruction.

Results While 129 (79.6%) patients were instructed on inhaled medication only once, 59 of them (45.7%) were considered to need continuing instruction. Of these 59 patients, 50 (84.7%) used the inhaler device incorrectly and 31 (52.5%) had a lack of understanding of inhalation technique. The other 33 (20.4%) patients were allowed to receive continuing instruction to acquire the correct inhalation technique.

Conclusions In this study, 43.2% were able to acquire the correct inhalation technique with only one teaching session on inhaled medicines, and 20.4% of patients were allowed to receive continuing instruction to acquire the correct inhalation technique. On the other hand, 36.4% did not receive subsequent guidance despite the need for continuous instruction. Therefore, a system that enables us to determine the patients who need continuous instruction is required. Furthermore, correct instruction on inhalation treatment might promise to potentiate clinical efficacy. We plan to establish a more appropriate system and improve information sharing among system users.

No conflict of interest.

CPC-051 EVALUATION OF IMPLEMENTATION OF CLINICAL PHARMACY SERVICES IN CENTRAL NORWAY

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Background Central Norway Pharmaceutical Trust consists of six hospital pharmacies covering eight hospitals. In partnership with a research group at the University of Lund and the Lund Hospital Pharmacy, Sweden, we implemented a model for clinical pharmacy services named Integrated Medicines Management (IMM) based on the Lund IMM model (LIMM) and the IMM model from Northern Ireland. Two years on we have evaluated the service.

Purpose To evaluate the implementation of clinical pharmacy services with regard to reduction in medicines errors (MEs), with the main focus on discrepancies in medicines reconciliation (MedRec)