Conclusions Strategists worldwide believe technology has the potential to promote quality, safety and efficiency in shared care where organisational, social and technical issues are addressed. However, evidence of hospital pharmacists' views, their perceptions of eHealth and shared care, organisational development and training needs remain under-researched.

References

1. World Health Organization (2010). Atlas eHealth country profiles: based on the findings of the second global survey on eHealth. WHO: Geneva.
2. Scottish Government (2008). eHealth Strategy 2008–2011. Available online at: http://www.scotland.gov.uk/Publications/2008/08/27103130/13
3. Greenhalgh, T. *et al*, (2005). Storylines of research in diffusion of innovation: a meta-narrative approach to systematic review. *Social science & medicine*, 61(2), pp. 417–430.

No conflict of interest.

DGI-002 ADRENAL INSUFFICIENCY INDUCED BY A CHINESE HERBAL MEDICINE

doi:10.1136/ejhpharm-2013-000276.268

[1]M Kieran, [2]C Gavin, [2]L O'Shea, [3]J Brady, [1]C Meegan. *[1]Mater Misericordiae University Hospital, Pharmacy Department, Dublin, Ireland (Rep.); [2]Mater Misericordiae University Hospital, Department of Endocrinology, Dublin, Ireland (Rep.); [3]Mater Misericordiae University Hospital, Biochemistry Department, Dublin, Ireland (Rep.)*

Background Chinese herbal medicines have a history, dating back to 1974, of containing strong prescription drugs [1]. In the United States (US), Food and Drug Authority (FDA) analysis of Chinese herbal preparations has found prednisolone, diazepam, paracetamol, indomethacin and hydrochlorothiazide [1].

During a routine review for type 2 diabetes, a MMUH patient reported new-onset fatigue. In view of the presenting complaint, a Synacthen test and thyroid function tests were performed. The patient's Synacthen test reported positive for adrenal insufficiency, despite an absence of other clinical symptoms. Repeat testing and external analysis confirmed the result.

Potential causes of the positive Synacthen test were investigated. On further questioning the patient admitted to taking a 'vitamin-type' tablet, which was a Chinese herbal medicine, Cow's Head Brand, Tung Shueh Pills. It was a suspected that the Tung Shueh Pills may have contained corticosteroids, which suppressed the patient's endogenous corticosteroid production, producing a positive Synacthen test.

Purpose To find out whether Cow's Head Brand, Tung Shueh Pills contained corticosteroids.

Materials and Methods Literature review for reports on Cow's Head Brand, Tung Shueh Pills.

Analysis of Cow's Head Brand, Tung Shueh Pills in collaboration with the Irish Medicines Board (IMB)

Results Cow's Head Brand, Tung Shueh Pills manufactured by the Ta Ang Pharmaceutical Company are included on a FDA list of products that require detention when being imported into the US [1]. There is also a case report of Tung Shueh Pills causing acute interstitial nephritis [2].

Review of the listed ingredients of the Tung Shueh pills did not identify any agents known to suppress endogenous corticosteroid production.

The IMB analysis of the agent reported that the product contained betamethasone, arsenic, lead, cadmium and antimony

The patient is currently receiving oral hydrocortisone, which is being tapered in accordance with Synacthen test results.

Conclusions Cow's Head Brand, Tung Shueh pills were found to contain a corticosteroid and heavy metals. Regular administration resulted in suppression of endogenous corticosteroid production, producing drug-induced adrenal insufficiency in a patient.

This case report highlights the importance of including herbal medicines in patients' medicines histories. It also highlights that a lack of regulation of Chinese Herbal Medicines enables inclusion of prescription agents, not included in the product ingredients, which may have significant pharmacological effects on patients.

References

1. FDA Import Alert #66-10, issued 18th March 2011. http://www.accessdata.fda.gov/cms_ia/importalert_173.html
2. Diamond, JR, Pallone, TL. (1994). Acute interstitial nephritis following use of Tung Shueh Pills. *Am J Kidney Disease* 24(2), 219–221.

No conflict of interest.

DGI-003 ANALYSIS OF CLINICAL EFFECTIVENESS OF TREATMENT WITH PEGINTERFERON PLUS RIBAVIRIN IN CHRONIC HEPATITIS C MONO-INFECTED PATIENTS

doi:10.1136/ejhpharm-2013-000276.269

I Larrodé, H Navarro, R Huarte, A Escolano, O Pascual, P Casajús, R Abad. *Servet, Pharmacy, Zaragoza, Spain*

Background Pegylated interferon (Peg-INF) in combination with ribavirin (RBV) is currently the gold standard treatment in chronic hepatitis C (HCV) patients, achieving viral eradication in approximately 50–60% of patients in published data.

Purpose To assess the clinical effectiveness of Peg-INF plus RBV for the treatment of chronic HCV mono-infected patients.

Materials and Methods Retrospective observational study involving 152 patients treated from October 2006 to July 2010. We collected demographic data (age, gender), laboratory reports (genotype, viral load), clinical characteristics, type of Peg-INF and RBV and Peg-INF doses. The primary end point was a sustained virological response (SVR). Secondary end points included rapid virological response (RVR), early virological response (EVR) (complete or partial), final viral response (FVR) and virological relapse. Exclusion criteria were: coinfection, haemodialysis and patients with insufficient data to analyse. Data were obtained from the pharmacy database and medical records.

Results 152 patients (mean age 46 years) were analysed and 84 were included. 65.5% were male. 67.1% with genotype 1–4. 51.2% were treated with Peg-INF α-2a. The average viral load was 1.9 × 1010 IU/ml and 40% of the patients had more than 600,000 IU/ml HCV RNA. The METAVIR liver fibrosis stage was F3–F4 in 36.6% of patients. 62.5% (50/80) achieved SVR, 72.0% in those with genotype 2–3 and 60.8% in 1–4. RVR was achieved in 31.7% of patients with genotype 1–4, and 73.9% in genotype 2–3. 69.2% of patients with genotype 1–4 achieved a complete EVR versus 92.3% in 2–3. 11.5% of patients with genotype 1–4 and 7.7% of those with 2–3 achieved a partial EVR. Relapse rates (18.2%) were lower in genotype 2–3 than in 1–4 (75% of them).

Conclusions The overall SVR rates observed were in accordance with published data, as well as the higher proportion of patients with genotype 2–3 that achieved a RVR and the highest rate of relapse observed in those with genotype 1–4.

No conflict of interest.

DGI-004 ANALYSIS OF CONSULTATIONS MADE BY PATIENTS IN AN OUTPATIENT SERVICE

doi:10.1136/ejhpharm-2013-000276.270

I Yeste Gomez, V Escudero Vilaplana, I Marquinez Alonso, C Rodriguez Gonzalez, P Arrabal Duran, B Marzal Alfaro, M Sanjurjo Saez. *Hospital General Universitario Gregorio Marañón, Pharmacy, Madrid, Spain*

Background hospital pharmacists interview all outpatients with a new prescription, including medication changes, and those who are suspected of not having good compliance. However, patients sometimes voluntarily demand to talk to the pharmacist.

Purpose The objective of this work was to evaluate the features of consultations made by patients in these situations.
Materials and Methods observational prospective study performed in all outpatients who demanded an interview with the pharmacist from 01/03/12 to 31/05/12. Data collected: sex, age, pathology, type of question, resolution (yes/no), and whether the patient was sent to another health professional or not.
Results 48 patients were included (56.25% male; mean age 47.25 years). Pathology: 29 HIV; 4 hepatitis C; 3 multiple sclerosis; 3 hepatitis B, and 9 others (one each): lung cancer, renal impairment, rheumatoid arthritis, multiple myeloma, myosarcoma, growth disorder, pulmonary hypertension, glaucoma, and aspergillus infection. Consultations were classified into 9 types showing in brackets the number of each: 1-Drug-drug interactions (14); 2-Apply for extra medication (9); 3-Side effects (8); 4-Dosage and administering(6); 5-Missed or wrong doses(6); 6-Prescription renewal(2); 7-Drug storage(1); 8-Faulty drug(1) and 9-Misunderstanding medical prescription(1). Forty-three consultations were solved by the pharmacist (89.58%). In the other 5 cases, patients were sent to the physician: two were taking the treatment incorrectly and needed a special cheque, two needed to renew the prescription and one was suffering severe side effects.
Conclusions The most common consultations were related to pharmacology except for 18,75% of patients who applied for extra medication (often not possible because of the hospital policy). The pharmacist was able to solve almost 90% of consultations, sending the patients to their doctors just in cases where their health was compromised or new prescriptions were needed.

No conflict of interest.

DGI-005 ANALYSIS OF LEVOFLOXACIN USE IN GERIATRIC UNITS AT A UNIVERSITY HOSPITAL

doi:10.1136/ejhpharm-2013-000276.271

C Lebaudy, F Chautant, I Bourgeois, F Boye, S Gerard, B Vellas, P Cestac. *University Hospital, Geriatric Department, Toulouse, France*

Background Overuse of antibiotics, such as fluoroquinolones and third-generation cephalosporins, is a major cause of the emergence of extended-spectrum beta lactamase producing enterobacteriaceae. The use of levofloxacin in elderly inpatients is widespread.
Purpose We investigated the conditions in which this drug was prescribed.
Materials and Methods From 1st January to 31st March 2012, information was recorded on every new levofloxacin prescription from the geriatric units: indication, dose, duration, patient's medical history, renal function and previous antibiotic. In parallel, levofloxacin consumption was assessed and expressed in terms of the number of Defined Daily Doses (DDD) per 1000 patient-days (PD). The consumption was compared with the data from the French antibiotic network "RAISIN".
Results 87 patients had a levofloxacin prescription: 55% for community-acquired pneumonia, 20% for nursing-associated pneumonia, 16% for nosocomial pneumonia, and 9% for others indications. 77% of the patients had previously received another antibiotic (47 amoxicillin/clavulanic acid, 20 ceftriaxone). Among patients without signs of gravity (tachycardia, tachypnea, hypotension), 1 in every 2 received levofloxacin associated with ceftriaxone, although this combination is only for intensive care patients according to the French Society of Infectious Diseases. The mean duration of treatment was 10 days. In 1 in every 2 cases, dosage was too high according to the renal function. As a result, the exposure to levofloxacin was 49 DDD per 1000 PD in acute-care units, and 37 DDD per 1000 PD in skilled units. These results are 4 to 7 times higher than those recorded in the "RAISIN" network. For 20% of the patients, levofloxacin was ineffective and another line of antibiotic was prescribed.
Conclusions Our results suggest that to reduce exposure to fluoroquinolones we should avoid systematic association with ceftriaxone, prescribe levofloxacin as the second line after amoxicillin/clavulanic acid and reduce dose and duration.

No conflict of interest.

DGI-006 ANALYSIS OF SAVINGS IF THE TREATMENT OF COMMUNITY-ACQUIRED PNEUMONIA (CAP) IS SWITCHED

doi:10.1136/ejhpharm-2013-000276.272

[1]E Dogliani, [1]F Perrino, [2]FG De Rosa, [3]F Cattel, [4]G Raineri, [5]M Abrate, [6]M Paire. *[1]Scuola di Specializzazione in Farmacia Ospedaliera, Università degli Studi di Torino, Cuneo, Italy; [2]Ospedale Amedeo di Savoia, S.C. Infettivologia, Torino, Italy; [3]AOU San Giovanni Battista – Molinette, S.C.Farmacia, Torino, Italy; [4]ASO S.Croce e Carle, S.C. Malattie Infettive e Tropicali, Cuneo, Italy; [5]ASO S.Croce e Carle, S.C.Farmacia, Cuneo, Italy; [6]ASL CN1, S.C Farmacia Territoriale, Cuneo, Italy*

Background Levofloxacin exhibits excellent bioavailability as well as pharmacokinetic equivalence between the oral and the parenteral form and is one of the medicines most used in the treatment of CAP.
Purpose The purpose of this study is to evaluate the savings that may be achieved by treating patients affected with CAP with sequential treatment (switching from intravenous to oral treatment).
Materials and Methods Both the cost and duration of treatment with levofloxacin were considered. The cost was given by: unitary cost of levofloxacin, cost of the nursing staff, cost of the material for parenteral infusion, cost of the hospitalisation. The duration was considered to be 5 days for patients without complications, 20 days for patients with complications and 10 days as the average in common clinical practise. This model was applied to reality in the S.C. Pneumologia of the ASO S. Croce and Carle of Cuneo. The patients hospitalised for CAP and treated with levofloxacin were individualised through the A.S.400 computerised applications.
Results In 2011 351 patients were hospitalised and treated with levofloxacin tablets and/or vials in the Pneumology ward; 90% of them were suffering from CAP.

For 10 days of treatment the sequential treatment would enable savings equal to 85€/patient. This saving would allow us to treat 12 more patients in a switched treatment regime. For 20 days of treatment the difference would be equal to 205€/patient quantifiable as 14 more patients with CAP treated in hospital without affecting the budget.
Conclusions Oral treatment, as it is equally effective, turns out to be the best therapeutic alternative in terms of savings. In future we will analyse the discharge letters of these patients under the model used in this study, thus assessing the real savings.

No conflict of interest.

DGI-007 ANALYSIS OF THE PRESCRIPTIONS OF ANTIBIOTICS AS LAST RESORT

doi:10.1136/ejhpharm-2013-000276.273

A Charuel, J Salles, P Guyot, M Legrand-Thapthimdoem. *Centre Hospitalier de Mayotte, Mayotte, Mamoudzou, France*

Background The composite index on proper use of antibiotics (ICATB) includes surveillance of the ATBs used, evaluation of ATB prescriptions and the existence of an ATB list associated with checking dispensing with limited duration.
Purpose To examine the conformity of ATBs as last resort prescriptions and to promote their proper use.
Materials and Methods 1988 prescriptions emanating from 7 units were investigated between 2009 and 2011, by taking into account 7 criteria: re-evaluation of the need to continue the treatment, conformity with administrative (AR), clinical/biological (CR), pharmaceutical (PR) requirements, the relevance of the