and the results are expressed as means $\pm$ SD for continuous variables and as percentages (%) for categorical variables.

Results 71 patients (53.3% women, mean age 82.7 ± 6.7 (58–94) years) were treated with an AChEI. 74.6% (53 patients) were simultaneously treated with a DAP. Mean concomitant prescribed drugs (DAP and non-DAP) was 11.6 ± 4.7 drugs (2–26). Prescribed AChEI were rivastigmine 56.3%, donepezil 38% and galantamine 5.6%. According to the classification of the systematic review of Durán *et al*, 71 patients were treated with a total of 95 DAP. The seven most frequently prescribed anticholinergic drugs were: quetiapine 39.4%, haloperidol 22.5%, ipratropium 21.1%, trazodone 14.1%, risperidone 12.7%, mirtazapine 7% and tramadol 5.6%. 57.7% of patients had dementia symptoms: confusional syndrome 31%, cognitive impairment 28.2%, mood disturbances 12.9% and somnolence 9.9%. The main destination was hospitalisation 85.9%, followed by hospital discharge 11.3% and death 2.8%.

Conclusion and relevance A high percentage of elderly patients with dementia treated with AChEI were taking concomitant DAP, that present accumulated risk. The combined use of these drugs can increase cognitive impairment and also antagonise the effects of AChEI. The results of the study suggest the need for considering other treatment options or a decrease in the prescriptions for DAPs to reduce the pharmacological interactions and the related adverse effects of concomitant use.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-184 KNOWLEDGE AND ATTITUDE ASSESSMENT OF PHARMACISTS TOWARD TELEPHARMACY IN RIYADH CITY, SAUDI ARABIA

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Background and importance Innovative technologies, such as telepharmacy, have significantly affected patient safety, quality of life and lowered healthcare costs. Telepharmacy has the potential to improve the quality of pharmaceutical care services by decreasing medication errors and adverse drug events. Also, telepharmacy can provide benefits in rural areas and places with a lack of facilities and/or specialist services.

Aim and objectives To evaluate the pharmacist's knowledge about the concept of telepharmacy, the skills required, the proper working environment and the attitude towards telepharmacy in Riyadh, Saudi Arabia, and to recognise any association between demographic factors, knowledge and attitudes towards telepharmacy.

Material and methods A cross sectional multicentre study design was selected by a convenience sampling technique. An anonymous survey was carried out among pharmacists in nine governmental hospitals in Riyadh, Saudi Arabia. A validated self-administered questionnaire was used for the survey to assess knowledge, perceptions and willingness to do telepharmacy. The data were analysed using SPSS V.25. Descriptive statistics, independent t test, the Kruskal-Wallis H test and one way ANOVA were performed.

Results The study achieved a final sample of 465 responses that were valid and complete, with a response rate of 66%. 76% of participants were women and 91% were aged <40 years. 58% of participants had a low level of knowledge about telepharmacy tools, while 37.7% of pharmacists believed that continuous training in telepharmacy was necessary for the workplace. 91.6% of the pharmacists who responded thought that using a telepharmacy system could save time and money. Substantial high positive attitudes towards telepharmacy were demonstrated (87% willingness, 87% perception), but knowledge was limited (58%). A strong association was found between gender perception and willingness (p value was 0.000, 0.009, respectively), and specialty with willingness (p=0.008). A statistically negative correlation was found between perception and gender (0.05 level using Pearson's correlation).

Conclusion and relevance It is reasonable to believe that there is a potential for telepharmacy to be completely incorporated into the healthcare system in the Kingdom of Saudi Arabia if adequate education and training for pharmacists have been given, as knowledge measurement was relatively low. Improving pharmacists' knowledge of telepharmacy is a key factor for effective implementation in the future.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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Conflict of interest No conflict of interest

5PSQ-185 ARE ADHERENCE TESTS IN ASTHMA STILL RELIABLE WHEN THE PATIENT KNOWS WHAT WE WANT TO HEAR?

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Background and importance Adherence to medication is very important in chronic diseases, such as asthma. According to the global initiative for asthma (GINA) guidelines, 50% of asthmatic patients on long term therapy fail to take medications as directed, at least some of the time. Furthermore, patients with poor adherence to medication are much more likely to suffer exacerbations.

Aim and objectives To compare the results of subjective adherence tests, such as the validated test of adherence to inhalers (TAI) in asthma with the results of objective adherence tests, such as the dispensing records.

Material and methods In the context of a doctoral thesis starting in January 2020 in a university hospital, every patient prescribed with a biologic agent for severe eosinophilic asthma had periodic interviews with a pharmacist during dispensation of the drugs. A total of 32 patients were recruited and, among other details, patients answered the TAI and their dispensing records for maintenance inhalers were checked by a pharmacist. The results of the TAI (0 to 50) and the dispensing records (0% to 100%) were compared, and the Pearson coefficient of correlation was calculated.

Results All patients answered the TAI and the mean result was 49.25 (46–50). The mean result for the dispensing records was 59% (0–100%) in the previous 6 months. The Pearson coefficient of correlation for these variables was 0.22.

Conclusion and relevance The coefficient was >0 , which suggests a positive correlation, but it was also very close to 0, which indicates that the correlation was very weak. Usually, asthmatic patients know the TAI as many pneumologists use it as a tool to calculate adherence, and therefore they know they are expected to get 50/50 in the test. However, the dispensing records are an objective method to measure adherence of patients and although it is not a substitute for the TAI, it should be complementary. When a patient with poor adherence is detected, pharmacists can play an important role with motivational interviews.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-186 MAIN POTENTIAL INTERACTIONS DETECTED IN THE OUTPATIENT CONSULTATION

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Background and importance In recent years, new oral treatments for cancer and hepatitis C have been authorised. These treatments have in common that they present a high risk of clinically relevant drug–drug interactions (DDIs). Polypharmacy and the use of complementary and alternative medicines (CAM) are increasingly common.

Aim and objectives To determine the prevalence and type of DDIs between selected drugs dispensed in the outpatient pharmacy service and drugs or CAM that patients take on a regular basis.

Material and methods A retrospective observational study was conducted. Inclusion criteria were patients treated with drugs with a high risk of clinically relevant DDIs for hepatitis C and oncohaematological malignancies between April 2018 and December 2019. Exclusion criteria were patients with other pathologies or treatments not considered 'high risk'. Variables studied were: demographics (age, sex), reconciled drugs, type of DDI and pharmaceutical recommendations (PR). Data were obtained from the medical history, prescription chart and patient interview at the time of the first dispensing act. For the analysis of DDIs, the Lexi-comp interaction database and About Herbs, Botanicals and Other Products were used.

Results 130 patients (59% men), median age 62 years (range 25–87), were included. Diagnosis was oncohaematologic malignancy in 84% of patients and hepatitis C in 16%. Median number of drugs and CAM reconciled per patient was 6 (range 0–17). Drugs dispensed in the outpatient clinic were: 17% capecitabine, 14% temozolomide, 14% dabrafenib/trametinib, 11% glecaprevir/pibrentasvir, 8% imatinib and 32% others. DDIs were detected in 45% of patients: 29% type X (avoid combination), 29% type D (consider treatment modification) and 42% type C (monitor). The therapeutic groups that patients took on a regular basis involved the following: 25% antipyretic analgesics (metamizole), 22% proton pump inhibitors, 10% HMG-CoA reductase inhibitors, 8% oral anti-diabetics and 34% others. DDIs with CAM were detected in 6% of patients. PRs were accepted, implemented in all cases and recorded in the patient's medical history: discontinuation

of treatment (26%), switch to therapeutic equivalent (24%), analytical monitoring (27%) and clinical follow-up (23%). In all CAM cases with DDIs, it was recommended to stop the medicinal plant.

Conclusion and relevance A high prevalence of moderate/severe interactions was observed in patients treated with oral antineoplastic and antiviral agents. This highlights the importance of continued pharmaceutical care and patient interview.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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5PSQ-187 ALTERNATIVE TREATMENT TO ORAL IVERMECTIN IN *STRONGYLOIDES STERCORALIS* HYPERINFECTION IN THE SETTING OF SMALL BOWEL OBSTRUCTION AND PARALYTIC ILEUS

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Background and importance Gastrointestinal complications, including small bowel obstruction and paralytic ileus, are associated with *Strongyloides stercoralis* hyperinfection syndrome, decreasing oral bioavailability. Ivermectin is the firstline agent for the treatment of strongyloidiasis as well as *S stercoralis* hyperinfection. In Europe, ivermectin is available in oral and parenteral formulations but the European Medicines Agency (EMA) has approved only the oral formulation for human use.

Aim and objectives The aim of the study was to describe alternatives to oral ivermectin when enteral absorption is compromised, regarding a recent case in our hospital.

Material and methods A bibliographic search was made using databases such as MEDLINE (Pubmed) and Micromedex. A specific search for official regulatory documents concerning human and veterinary medical products, from the websites of the EMA, was carried out. Therapeutic options found were assessed by the multidisciplinary infectious diseases team, including a clinical pharmacist.

Results Rectal and parenteral administration of ivermectin were the two therapeutic alternatives found to the oral route. Subcutaneous ivermectin is approved in Europe for veterinary use; its use in humans may be a therapeutic option but this requires an investigational new drug exemption from the EMA. After approval, subcutaneous ivermectin was started at a dose of 200 µg/kg/day. The rectal route was also assessed. Compounding pharmacists prepared enemas of ivermectin (12 mg/30 mL) from the tablets marketed for human use, which were administered every 12 hours. A progressive decrease in the parasite load was observed. *S stercoralis* was no longer detected in stools after 14 days of treatment, and on sputum gram stain after 25 days. The patient continued on therapy until a second negative sputum on day 33. Despite the resolution of the *S stercoralis* infection, the patient died due to multiple complications, including sepsis caused by translocation through the intestinal mucosa of gram negative bacteria into the bloodstream together with the larvae.

Conclusion and relevance The lack of treatment alternatives to oral ivermectin implies the use of off-label therapies. Subcutaneous ivermectin, available for veterinary use, and rectal ivermectin, compounded from marketed tablets, could be valid