4CPS-253 COMMUNITY PHARMACY-BASED EGFR SCREENING FOR EARLY DETECTION OF CHRONIC KIDNEY DISEASE IN HIGH-RISK PATIENTS

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Background Chronic kidney disease (CKD) is a condition presenting with long-term slow progression of structural and/or functional damage to the kidneys. Early detection is key to improved outcomes. Point-of-care eGFR screening technology allows for detection of abnormal kidney function in the community pharmacy setting.

Purpose To evaluate the effectiveness of a community pharmacist-directed point-of-care screening programme and to identify the prevalence of CKD in high-risk patients.

Material and methods Patients with at least one CKD risk factor were identified at four community pharmacies in British Columbia. They provided a sample of peripheral blood via a self-administered finger-prick and analytical data to assess kidney function that was reported including BUN, serum creatinine, and electrolytes by the HealthTab screening system. The eGFR was calculated according to the CKD-EPI formula. Once results were available the pharmacist conducted a comprehensive review with the patient and recommended certain follow-up actions if appropriate.

Results Six-hundred and forty-two participants were screened over a 6 month period. Mean age was 60 years and females accounted for 55% of the study population. CKD risk factors included diabetes (30%), hypertension (45%), cardiovascular disease (12%), family history of kidney disease (13%), age over 55 years (68%) and an Aboriginal, Asian, South Asian or African ethnic background (82%). 11.5% of patients had eGFR values lower than 60 mL/min (abnormal renal function) and 34% had an eGFR between 60 mL/min and 89 mL/min (minimally reduced renal function). Overall pharmacists' actions included blood pressure check (98%), education on CKD and risk factors (89%), medication review (72%) and physician follow-up (38%).

Conclusion These results illustrate the prevalence of abnormal renal function among undiagnosed, high-risk patients in the community. Pharmacists, as the most accessible health-care practitioners, are ideally positioned to utilise novel point-of care technologies to improve access to CKD screening and increase awareness around the importance of early detection.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.

4CPS-254 BIOSIMILAR RITUXIMAB – A YEAR BEYOND

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Background The introduction of a biosimilar drug represents similar efficacy at lower cost, providing savings without

compromising patient treatment. In oncology, biological therapies account for more than 33% of health expenses.¹

Rituximab has a particular profile of first infusion-related reactions (IRR), such as hypersensitivity reactions, hypotension and cardio-respiratory compromise, which may lead to treatment discontinuation.²

Purpose To evaluate the safety profile of biosimilar rituximab in the approved indications and the economic impact of the introduction of biosimilar rituximab.

Material and methods Retrospective analysis of first IRR reported to the pharmacy services or described in the patient file with biosimilar rituximab, between July 2017 and July 2018. The switch to biosimilar rituximab was performed in all patients.

Results During the analysis period, 127 patients had been treated with biosimilar rituximab. According to their pathology, they were classified into two categories: oncological, 48% and non-oncological disorders, 52%, which included rheumatoid arthritis (RA) and off-label use.

In the oncological group, the switch was carried out in 9.8% of patients, 90.2% were naïve. The mean time between the last administration of rituximab and the first administration of biosimilar rituximab was 34 days [(21–58 days). Three suspension cases of biosimilar rituximab have been reported, resulting in two successful re-challenges and one permanent discontinuation. The rate of first IRR was 6.5% in oncological disorders, with three severe reactions (4.9%).

Regarding the non-oncological group, the switch was performed in 39.4% of patients, 60.6% were naïve. The mean switch time was 13.6 months (0.9–48 months). One case of suspension was reported, which resulted in a successful re-challenge. The rate of first IRR was 2.9% for RA, with no severe reactions.

Biosimilar rituximab introduction translated into a 64% cost reduction of € 1 71 000.

Conclusion Biosimilar rituximab introduction resulted in significant savings (64%) with no major changes in safety profile (4.5% oncological disorders and none for RA of severe first IRR), when compared with the summary of product characteristics of the originator (12% and 0.5%).² The difference may be associated with an underestimated report, since it is a commonly used drug with a known IRR profile.

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4CPS-255 THE EFFECT OF AN ENHANCING MEDICATION ADHERENCE PROGRAMME FOR A TYPE 2 DIABETES MELLITUS NETWORK

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Background The record of Rayong Hospital's Tapong branch between October 2015 – September 2016 showed that there were 399 patients with HbA1C ≥ 8 mg% and a mean 14.72% among total patients. The hospital team discovered this problem and created the programme to educate patients and consult them case-by-case.

Purpose The aim of this study was to assess medication adherence and knowledge of type 2 diabetes mellitus (DM) patients upon completion of the proposed programme.

Material and methods This study was conducted from November 2016 – August 2017 and obtained IRB from the Rayong Hospital. The questionnaires were using for evaluating medication adherence and knowledge by pretest-post-test design. There were 30 purposively selected patients. The education programme was developed by the hospital team which contained topic pathology of type 2 DM, medication management, the important of medication, side effects, ADR, management of drug-related problems and diet control.

The process of the programme was that at first visit, patients came to consult a doctor at the Rayong Hospital, Tapong branch. If patients had HbA1C $\geq$ 8 mg%, the staff asked them to join the programme. When patients came to the pharmacy department, pharmacists gave them a pre-test, dispensing medicine and advice. The second visit was class education. On the third visit, patients saw the doctor again. After that, the pharmacist gave them the post-test.

Results When comparing the pre-test and post-test medication adherence levels among those patients with high medication adherence scores, 53.33% of patients had improved significantly. When comparing the pre-test and post-test knowledge levels among those patients with high knowledge scores, 73.33% of patients had improved significantly. After attending the programme, patients had improved their medication adherence and knowledge statistically significantly ($p < 0.01$). The patients' HbA1C values reduced 2.72% on average after attending the programme, so this study can reduce their HbA1C clinically significantly.

Conclusion This study result shows that medication adherence and knowledge of patients is effect to HbA1C control. Pharmacists' intervention can help patients understand their pathology and medication management, and can improve their medication adherence and contribute to increased blood-sugar control.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-256 LINEZOLID USAGE AND COST ANALYSIS AFTER A HOSPITAL TRANSFER

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Background Linezolid is a broad-spectrum antibiotic active against gram-positive bacteria and its use must be controlled. The definite daily dose (DDD) is a statistical measure of drug consumption: the assumed average maintenance dose per day for a drug used for its main indication in adults. In June 2014, the hospital was transferred to the new utilities and e-prescribing, with clinical decision support systems implemented.

Purpose To quantify and analyse the use of linezolid and its cost, after a hospital transfer and e-prescribing implementation.

Material and methods Observational, retrospective study of linezolid usage from January 2013 to December 2016. We established two study periods: pre-transfer and post-transfer. Oral linezolid (suspension and tablets) and intravenous (IV) doses dispensed were reviewed in hospitalisation units (HU) and intensive care units (ICU). Data were obtained from Pharmacy Management Application: the number of doses dispensed and their cost. We determined the number of DDD/100 stays using a linezolid DDD value of 1.2 g (600 mg/12 hour).

Results During the pre-transfer period a total of 6310 doses were dispensed for the HU (mean of 350 per month): 69.27% IV, 30.52% tablets, 0.21% suspension. In the ICU 3,236 units (179 units/month): 92.49%, 7.23% and 0.28%, respectively. The total cost was € 549,954.6 (€ 30,553.03/month). During the post-transfer period: a total of 29 239 doses were dispensed for the HU (mean of 974 per month): 36.67% IV, 63.08% tablets, 0.25% suspension. In the ICU 4,931 units (164 per month): 92.94%, 7.00% and 0.06%, respectively. The total cost of linezolid was € 1,968,369.75 (€ 65,612.33/month). The number of DDD/100 stays for linezolid in the HU was 0.99 (2013), 1.21 (2014), 2.33 (2015) and 2.49 (2016) and in the ICU: 7.73 (2013), 8.1 (2014), 8.1 (2015) and 7.9 (2016).

Conclusion After the transfer, linezolid usage has increased (x3) in the HU, remaining stable in the ICU. The number of DDD/100 stays confirms these results. In the HU there was an increase in the use of oral versus parenteral linezolid. This may be related to the inclusion of sequential therapy protocols as clinical decision support systems in the computerised provider order entry, after the hospital transfer. DDD/100 stays is a valid and useful indicator to quantify the use of antibiotics and identify usage changes, and it is used frequently in antimicrobial stewardship programmes. A deeper analysis is needed to identify the causes of the increase in use of linezolid and to implement measures to control it.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-257 DETERMINING FACTORS AFFECTING PATIENTS' CLARITY ON DISPENSED MEDICATION INSTRUCTIONS: A CASE STUDY AT COPPERBELT UNIVERSITY HEALTH FACILITY IN KITWE, ZAMBIA

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Background According to the Institute of Medicines, it is estimated that nearly one-half of all adults in the United States have problems in complying with medication instructions. This has become a challenge worldwide to achieve a comprehensive healthcare delivery to patients. A study to establish factors why some patients misunderstand medication instructions was conducted at the Copperbelt University clinic.

Purpose To determine the factors that influence patients from getting medication instructions from the dispensary clearly. To identify the more prevalent factors that cause misunderstanding between dispenser and patient when medication instructions or information is being given.

Material and methods A semi-structured interview with patients was used. Regarding patients understanding of the instructions given by the dispenser when medicines were supplied to them, an exit interview was carried out by the researcher to