

therapies, a close patient guidance and management is essential to prevent treatment failure because of drug-drug or drug-food interactions, side effects or non-adherence.

Aim and objectives The aim of this study is to investigate whether integrating a clinical pharmacist/clinical pharmacologist into a multi-professional care team can improve patients' safety, knowledge and well-being.

Materials and methods For this purpose, 200 patients will be randomised. While the intervention group will receive an intensive care program with information material and side effect management, the control group will only receive routine clinical care. Primary outcome parameters are the number of drug related problems (medication errors and side effects) regarding the oral anticancer drug and patient satisfaction (TSQM questionnaire). Further outcome parameters will include, for example, the number of serious side effects and hospitalisation rates.

Results For this interim analysis, 100 patients were included. In the intervention group the number of drug related problems regarding the oral anticancer treatment was reduced (7.38 vs. 4.75 per patient; $p < 0.05$) and patient satisfaction was significantly increased ($p < 0.01$). The intervention group showed a lower rate of serious side effects and was less frequently admitted to a hospital.

Conclusion and relevance The high rate of drug related problems in this patient population indicates that cancer patients treated with oral anticancer drugs must be considered as a high-risk patient group. Early intervention can reduce serious side effects and increases patients' satisfaction. The integration of a clinical pharmacist/clinical pharmacologist in a multi-professional care team increases medication safety in patients treated with oral anticancer drugs.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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NP-003

STEADY-STATE PHARMACOKINETICS AND EARLY SAFETY DATA IN HIV-INFECTED AFRICAN CHILDREN WEIGHING ≥ 25 KG AFTER SWITCHING TO 50 MG FILM-COATED DOLUTEGRAVIR TABLETS IN THE ODYSSEY TRIAL

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Background and importance ODYSSEY is an ongoing international randomised trial evaluating dolutegravir (DTG)-based antiretroviral therapy (ART) versus standard-of-care in HIV-infected children starting first- or second-line ART. Pediatric DTG film-coated tablets (FCTs) of 10 mg and 25 mg are unavailable in low- and middle income countries (LMIC) were most HIV-infected children live. Adult DTG 50mg FCTs are produced by generic manufacturers at low-cost, are well-tolerated, and already available in many high- and LMICs.

Aim and objectives Within ODYSSEY pharmacokinetic (PK) substudies were undertaken to assess PK and safety data for a simplified paediatric DTG dosing approach using WHO weight bands (WBs) 25 to < 30 kg and 30 to < 40 kg and once daily 50 mg adult DTG doses.

Materials and methods Steady-state 24-hour PK curves were constructed from data in children (≥ 3 h fasted) observed taking current EMA-approved DTG doses of 25 mg and 35 mg (10 mg+25 mg FCTs) in 25- < 30 kg and 30- < 40 kg WBs, respectively. After all children switched to single daily 50 mg DTG tablet, a second 24 h PK curve was constructed. We aimed to achieve DTG exposures comparable to historical adult data for DTG 50 mg FCTs QD taken under fasted conditions (geometric mean (GM): C_{trough} 0.83 mg/L, AUC_{0-24h} 43.4 h*mg/L, C_{max} 3.34 mg/L). Additionally, results were compared to PK data for DTG 50mg BID in adults (GM ranges: C_{trough} 2.41 to 2.72 mg/L, AUC_{0-24h} 93.4 to 92.7 h*mg/L, C_{max} 5.41 to 5.55 mg/L). Safety was evaluated after switch to the 50mg dose at 2, 4 and 12 weeks and then every 12 weeks.

Results 28 black-African children (52 PK profiles) from Uganda and Zimbabwe (61% male) with a median (range) age of 11.0(7.5–17.9) years old were included. For children weighing 25- < 30 kg on DTG 25 mg (17 profiles) GM with coefficient of variation (CV%) for C_{trough} and AUC_{0-24h} was 0.39(48) mg/L and 33.1(23) h*mg/L, respectively, and after switch to DTG 50 mg (16 profiles) values were 0.77(43) mg/L and 58.6(28) h*mg/L, respectively. For children weighing 30- < 40 kg on DTG 35 mg (9 profiles), C_{trough} and AUC_{0-24h} were 0.46(63) mg/L and 40.3(35) h*mg/L, and after switch to DTG 50 mg (10 profiles) values 0.63(49) mg/L and 53.5(32) h*mg/L, respectively. The 50 mg dose resulted in C_{max} values of 5.41(25) mg/L and 5.22(25) mg/L in WB 25- < 30 kg and 30- < 40 kg, respectively, which did not exceed historical C_{max} values for adults on 50 mg BID. After a median (IQR) follow-up of 30(12–30) weeks on 50 mg DTG 3/28(11%) children had grade 3 or 4 adverse events (one SAE; cryptococcal meningitis) and all were considered unrelated to DTG.

Conclusions and relevance Adult 50 mg FCT once-daily dolutegravir provides appropriate PK profiles in children ≥ 25 kg, with no safety signal, allowing practical dosing and rapid access to dolutegravir. WHO has released new pediatric dosing guidelines in response to these results.

NP-004

INITIATION OF A CLINICAL PHARMACIST LED, PROSPECTIVE AUDIT ON ANTIBIOTIC PRESCRIBING

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Background and importance A pharmacist led, prospective audit on antibiotic prescribing was introduced on three hospital wards, as an element of the local, institutional antibiotic stewardship program (ASP).

Aim and objectives Our aims were to document and evaluate each antibiotic prescription and therapy based on the antimicrobial stewardship program recommendations and to give feedback to prescribers on their compliance to ASP guidelines.

Material and methods A paper-based audit form was prepared. Patient data, documentation of allergies, indication of the therapy and circumstances of microbiological testing were

recorded. The pilot phase was started in September 2018, and ended in November 2018. Detailed information on antibiotic therapy and the 48-72-hour revision and its outcome were also documented. Pharmacist interventions and their acceptance were collated. Microsoft Excel and R-Commander were used for data management and analysis.

Results 69 patients were involved in our study, 45 men and 24 women (mean age was 57.7 years \pm 16.4 years and 71.3 years \pm 12.5 years). Overall, 84 antibiotic therapies (50 empirical and 34 targeted) were evaluated. 21 different antimicrobial agents were prescribed, the most frequent were cefuroxime (21 cases) and amoxicillin-clavulanic acid (15 cases). Based on clinical pharmacist and infectologist follow-up decisions, 44 cases (52%) of all antibiotic therapies were inappropriate. Initial antibiotic therapies weren't optimal in 29 cases (35%), mainly due to the unnecessarily wide spectrum of the chosen drug (65% of initial inappropriate therapies). Therapeutic decisions at the revision point were inappropriate in 32 cases (38%). Pharmacist interventions were offered in 50 cases, most frequently de-escalation (16 cases), and parenteral-oral conversion of the therapy (15 cases). The interventions were actioned in 60% of the cases. Higher rates of interventions were accepted when modification of the dose was advised (87%) and lower acceptance when de-escalation was suggested (31%).

Conclusion and relevance The audit gives the pharmacist an opportunity to give continuous feedback to prescribers in order to improve their compliance with the ASP guidelines. The relatively high rate of inappropriate antibiotic prescriptions shows a need for improvement in this area. Longer term, an improved synergy between clinical pharmacists and prescribers may result in an increased acceptance rate of pharmacist interventions.

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<https://www.ashp.org/Products-and-Meetings-Aliases/The-Pharmacists-Guide-to-Antimicrobial-Therapy-and-Stewardship> https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/417032/Start_Smart_Then_Focus_FINAL.PDF

NP-005

IMPLEMENTING MEDICATION RECONCILIATION ON HOSPITAL ADMISSION: A MULTICENTRE PILOT STUDY IN ESTONIA AND FINLAND

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Background and importance Transitions of care have been determined to be one potential source of errors, especially in relation to medications. WHO has pointed out the need to improve patient safety at transitions for many years as the probability of communication errors increases with a patient moving between facilities, sectors and staff. Almost two thirds of medication errors happen at transitions of care and these mistakes expose patients to medication-related problems and adverse drug events.

Aim and objectives To assess the effect of pharmacist-led medication reconciliation and to evaluate if a hospitalised patient's medication history is accurately recorded.

Materials and methods Medication reconciliation was performed by the pharmacist within 24 hours after the patient's

admission to the nursing, internal medicine or surgical ward using the validated data collection form in 5 hospitals.

Results A total of 101 patients were included in the pilot study with a mean age 73 years. A total of 218 medication discrepancies (MD) were revealed and 80% patients had at least one MD, a mean of 3.74 MDs per patient among those having MDs. 65% MDs were identified as unintentional MDs and they affected 54% patients with a maximum number of 10 discrepancies per patient case. 41% of MDs were considered clinically relevant by the joint decision of the pharmacist and the prescriber and the patient's medication list was modified. The most common discrepancies were drug omission (50%), relating food supplements (14%), incorrect dose (10%) and frequency (5%). Older female patient taking at least 5 medications had the highest probability of discrepancies to arise.

Conclusion and relevance The results indicate that the process of collecting medication history needs improvement by implementing medication reconciliation as in 80% of cases patients' medication list obtained by the pharmacist and nurse were not a complete match and half of the patients had at least one unintentional medication discrepancy. This finding is similar to other studies regarding medication reconciliation.

NP-006

A PAIR OF PHARMACY TECHNICIAN/NURSE TO TRAIN ON THE ANTI-RETURN VALVES

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Background and importance The training of nursing staff is a major issue in hospitals. In the cardiology intensive care unit, an audit showed a lack of knowledge of the health care staff about the use of anti-return valves.

Aim and objectives The aim is to make nurses aware of the proper use of anti-return valves by a fun and practical training delivered by a pharmacy technician and a nurse of another care service.

Materials and methods Training was developed, along with a pre/post knowledge assessment (three questions) and a satisfaction questionnaire. It has two clinical cases. The first compares in real time and interactively the fluid movement of two assemblies, one of which contains an anti-return valve undergoing obstruction of the perfusion. The second one has to objective to let them mounting an infusion line by positioning the anti-return valves. After qualification by a pharmacist, the pharmacy technician/nurse pair then formed the cardiology intensive care team.

Results The duration of training for the capacitation of the pair was 2h30.

Six 30-minutes sessions were conducted to train 16 nurses (100% of the staff).

The pre-training questionnaire average was 8.7/20 and in post-training 16.2/20, which is a statistically significant improvement in knowledge (p-value<0.05). 100% of the nurses were satisfied with the training (content, pace, duration).

Regarding the pair of trainers, the completion of the training allowed the nurse to discover the practices in another department and the pharmacy technician to work in