IUPHAR
INTERNATIONAL UNION OF BASIC AND CLINICAL PHARMACOLOGY

SRI LANKA ASSOCIATION OF CLINICAL PHARMACOLOGY & THERAPEUTICS (SLACPT)

NATIONAL SCIENCE FOUNDATION

ClinPharm 2024

Challenges in Medication Without Harm

Safety, Quality and Rational Use

PROCEEDINGS

10th -13th July 2024

Bandaranaike Memorial International Conference Hall (BMICH), Colombo, Sri Lanka

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In collaboration with

International Union of Basic and Clinical Pharmacology (IUPHAR)

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LISTS OF ORAL & POSTER PRESENTATIONS

ORAL PRESENTATIONS

SESSION I

11th July 2024 (Thursday) 2.30 pm – 3.30 pm, Lotus Hall, BMICH

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Development of a national action plan on medication safety for implementation in Sri Lanka

Galappatthy P[1], Ranaweera D[2], Liyanage C.K[1], Wijemanne U, Bandara G. R. W. S. K[5], Weliwatte I. P.[3] Ranasinghe P[1], Samaranayake N[3], Jayawardane P[4], Panapitiya L[6]

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OP 2

Developing a list of look-alike sound-alike medicines and error prevention strategies for Sri Lanka

Bandara G.R.W.S.K [1, 2], Samaranayake N.R [3], Galappaththy P [1]

[1]Department of Pharmacology, Faculty of Medicine, University of Colombo, [2]Ministry of Health, Nutrition & Indigenous Medicine, Sri Lanka, [3]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura

OP 3

Developing a list of High Alert Medicines (HAM) and error prevention strategies for Sri Lanka

Bandara G.R.W.S.K [1, 2], Samaranayake N.R [3], Galappaththy P[1]

[1]Department of Pharmacology, Faculty of Medicine, University of Colombo, [2]Ministry of Health, Nutrition & Indigenous Medicine, Sri Lanka, [3]Department of Pharmacy and Pharmaceutical Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura

OP 4

Assessment of the prescribing and dispensing safety using selected safety indicators developed and validated for use in Sri Lanka

Weliwatte I.P[1], Ranasinghe R.A.S[1], Samaranayake N.R[1], Jayawardane P[2], Galappatthy P[3]

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OP 5

Artificial intelligence assisted automated essay scoring tool to evaluate Short Answer Questions in Pharmacology

Seneviratne H.M.T.W, Manatunga S.S

Department of Pharmacology, Faculty of Medicine, University of Peradeniya

OP 6

The occurrence of the potential drug – drug interactions among geriatric patients at the Cardiology Unit of National Hospital, Colombo

Nilukshan S[1], Peries T.S.S[1], Kalyanathunga P[1], Paramanathan K[1], Sanchayan K[2]

[1]Department of Pharmacy, Faculty of Allied health Sciences, University of Jaffna, [2]Department of Pharmacology, Faculty of Medicine, University of Jaffna, Sri Lanka

SESSION 2

12th July 2024 (Friday) 8.00 am to 9.00 am at Lotus Hall, BMICH

OP 7

Association between development of atrioventricular (AV) blocks and reverse tick sign of digoxin effect in acute yellow oleander (*Thevetia peruviana*) poisoning patients

Eriyawa W.M.A.B.W [1,2], Jayamanne S.F[3], Lokunarangoda N.C[4], Francis G.R[5], Jayawardane P[6]

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OP 8

Effectiveness of usage of intravenous lidocaine and intravenous ketamine infusions combination for chronic pain in pain clinic: Colombo North Teaching Hospital, Ragama

Samanthi A.A.N[1], Ranasinghe S.S[1], Meththananda C[2]

[1]North Colombo Teaching Hospital, Ragama, [2]Faculty of Medicine, University of Kelaniya

OP 9

Frequency of pharmacogenomic variants affecting efficacy and safety of anti-cancer drugs among Sri Lankans

Manchanayake M.M[1], Ranasinghe P[1], Sirisena N.D[2], Vishnukanthan T[2], Ariadurai J.N[2], Thilakarathne S[2], Priyadarshani C.D.N[2], Hendalage D.P.B[2], Dissanayake V.H.W[2]

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OP 5

Artificial intelligence assisted automated essay scoring tool to evaluate Short Answer Questions in Pharmacology

Seneviratne H.M.T.W, Manatunga S.S
Department of Pharmacology, Faculty of Medicine, University of Peradeniya

Background: The skill in answering pharmacology short answer questions (SAQ) in undergraduates need to be optimized. The most appropriate method would be to give individual personalized feedback. Yet given the high number of students and staff shortages this task is becoming practically difficult. Hence, we aimed to develop automated essay scoring (AES) system using artificial intelligence (AI) to evaluate written answers. **Methods**: This study explored using large language models (LLM), to develop AES aligned to instructor-provided rubrics. Evaluations used GPT-4. SAQ, model responses, and rubrics from Pharmacology course were provided to the LLM. For student answers, the LLM extracted relevant excerpts, assigned scores based on rubric criteria, and provided total marks for the answer together with feedback mentioning strengths and weaknesses. The study was conducted at the department of pharmacology, faculty of medicine, Peradeniya. **Results**: 30 student answers in pharmacology were evaluated using the AES tool. The same were evaluated by two independent human examiners and marks were compared to assess the co-relation. AI -AES marks showed high correlation with independent human examiners (correlation coefficients of 0.93 and 0.96). An intra-class correlation coefficient of 0.94 indicated excellent inter-rater reliability between the AI-AES and human examiners. **Conclusion**: AI- AES tool shows promise for transparent, flexible automated SAQ marking. This approach could enhance writing skill development in undergraduates. Future work to assess pedagogical impacts is warranted.

OP 6

The occurrence of the potential drug – drug interactions among geriatric patients at the Cardiology Unit of National Hospital, Colombo

Nilukshan S[1], Peries T.S.S[1], Kalyanathunga P[1], Paramanathan K[1], Sanchayan K[2]
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Background: Potential drug-drug interactions (pDDI) refer to the effects that may occur when two or more drugs are administered concurrently. Drug interactions have the potential to undermine therapeutic outcomes and cause major undesired consequences. Geriatric patients are particularly vulnerable to those consequences of pDDIs due to their age-related changes in pharmacokinetics and pharmacodynamics. Therefore, monitoring pDDIs plays a vital role in the management of geriatric patients to minimize the occurrence. **Methods**: This retrospective, cross-sectional study, conducted in the cardiology unit of National Hospital Colombo, analyzed 385 prescriptions from geriatric patients with 5 or more drugs in the year

2022. The study identified pDDIs as listed in the British National Formulary (BNF) and categorized these pDDIs into mild, moderate, and severe classes accordingly. The Chi-square test assessed associations between factors (age, gender, number of prescribed drugs) and the presence of pDDIs. A significant P value (< 0.05) was considered. **Results:** In this study analyzing 385 prescriptions, the average age was 66.21 years. About 28.6% (N=110) of prescriptions had pDDIs with 70% having one and 30% having two. A total of 143 pDDIs were found, with the majority (56.7%) being classified as severe interactions. The analysis identified 24 unique pDDI pairs involving 27 drugs. Common severe pairs included aspirin-nicorandil. Moderate pairs included atorvastatin-ranolazine. The presence of pDDIs was significantly associated with (Female) gender (p=0.017) and number of prescribed drugs (p=0.027). There was no significant association between age and the presence of pDDI (p=0.873). **Conclusion**: Our study found that, 29% prevalence of PDDIs in Cardiology unit prescriptions at National Hospital Colombo. Interestingly, there was a statistically significant association between sex (Female) and numbers of drugs in the prescription with the presence of pDDIs. These findings emphasize the need for increased awareness on pDDIs among medical professionals, suggesting potential improvements in prescription practices within the Cardiology unit at National Hospital Colombo.

OP 7

Association between development of atrioventricular (AV) blocks and reverse tick sign of digoxin effect in acute yellow oleander (*Thevetia peruviana*) poisoning patients

Eriyawa W.M.A.B.W [1,2], Jayamanne S.F[3], Lokunarangoda N.C[4], Francis G.R[5], Jayawardane P[6]

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Background: Yellow oleander contains cardiac glycosides which result in arrhythmias, heart blocks and electrolyte imbalances. The objective of the study was to find whether development of reverse tick sign of digoxin effect within first 24 hours of admission predicts development AV blocks. **Methods:** A prospective descriptive cohort study was carried out at Teaching Hospital Batticaloa, Sri Lanka, from 1st July 2022 to 31st July 2023 among patients admitted following acute yellow oleander poisoning. The inclusion criteria were presence of any of the following signs: bradycardia (<60 bpm), systolic blood pressure <80mmHg nausea, vomiting, abdominal pain, diarrhea, xanthopsia. Patients were recruited within 2 hours of admission. Serial electrocardiograms were done at recruitment and every 4 hours, for 1st 24 hours of admission. Odds ratio (OR) was calculated to determine the likelihood of developing AV blocks in patients with reverse tick sign of digoxin effect. Ethical Clearance for this study was granted by the Ethics Review Committee of the Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka. **Results:** Among 200 consenting symptomatic patients