7th World Congress on

Clinical Pharmacy and Pharmacy Practice

December 07-09, 2017 | Rome, Italy

Scientific Tracks & Abstracts

Day 1






Clinical Pharmacy: Activities and Prescriptions | Clinical Pharmacology | Biopharmaceutics

Session Chair
Golden L Peters
Saint. Louis College of Pharmacy, USA

Session Introduction

Title: **Inter-professional team approach to geriatric care**
Janice Hoffman, Western University of Health Sciences, USA

Title: **Understanding the pharmacology and toxicology properties of transdermal Buprenorphine and Fentanyl to ensure the safety and efficacy of drugs use**
Christina Yuen Ki Leung, The University of Hong Kong – Shenzhen Hospital, China

Title: **A clinical audit of sterile medical devices: A French experience of quality and safety improvement in hospital services**
Valeria Vinciguerra, Gradenigo Hospital, Italy

Title: **How do clinical pharmacists keep up-to-date with newly approved medications? Update on newly approved medications from the Food and Drug Administration (FDA) in the United States**
Golden L. Peters, Saint. Louis College of Pharmacy, USA

Title: **Effect of low-dose oral acetylcysteine on cisplatin-induced mitochondrial oxidative stress in patients with head and neck cancer**
Patricia Moriel, University of Campinas, Brazil

Title: **Deprescribing: Knowing when to stop**
Patrick Viet-Quoc Nguyen, University Hospital of Montreal, Canada

Title: **Medication Management of Chronic Pain – A comparison of two care delivery models: Pharmacist + Physician team compared to a solely physician model**
Marlene Slipp, Central Alberta Pain & Research Institute (CAPRI), Canada

Title: **Double-blind clinical study of the therapeutic effects of pomegranate juice powder on renal damage in diabetic nephropathy**
Elnaz Faridi, Shiraz University of Medical Sciences, Iran

Title: **Chinese centralized intravenous admixture service (CIVAS): An emerging pharmaceutical industry-survey of the recent advances of CIVAS in China**
Xianghong Liu, Shandong University, China

Inter-professional team approach to geriatric care

Janice Hoffman, Anna Yeung and **Mary Hudson-McKinney**
Western University of Health Sciences, USA

According to the 2015 World Health Organization, on average, people around the world are living longer. Thirty percent of the Japanese population are aged 65 years and over. In the United States of America alone, over 10,000 people turn 65 every day, which translates into one person every eight seconds. Máire Geoghegan-Quinn, the former European Commissioner for Research, Innovation and Science, stated that by 2020 a quarter of the population of Europe will be 60 years or older. With the worldwide ageing population, the importance of optimizing health care delivery to seniors must be urgently addressed. With this shift of focus to chronic diseases of aging, appropriate medication use becomes a top priority. This presentation will review the specific pharmacokinetic and pharmacodynamics changes that accompany the aging process as well as the role of the pharmacist within an interdisciplinary geriatric team to improve the effectiveness and efficiency of the provision of care for the elderly. Upon completion of this workshop, participants will have gain a working knowledge of how to provide inter-professional team-based care for the aged across the continuum of care levels.

Biography

Janice Hoffman is an Associate Professor of Pharmacy Practice at Western University of Health Sciences in Pomona California, USA. She is a Certified Geriatric Pharmacist and a Fellow of the American Society of Consultant Pharmacists (ASCP). She has received her Doctorate (PharmD) from the University of Southern California and completed her Clinical/Administrative Psychiatric Pharmacy Practice with an emphasis in Geriatrics Residency at the University of Maryland at Baltimore. Professionally, she has received accolades as the Commission for Certification in Geriatric Pharmacy (CCGP), Excellence in Geriatric Practice Award recipient. Currently, she practices at Los Angeles Jewish Home geriatric-psychiatric unit.

jhoffman@westernu.edu

Notes:

Christina Yuen Ki Leung, J Pharmacol Ther Res 2017

Understanding the pharmacology and toxicology properties of transdermal Buprenorphine and Fentanyl to ensure the safety and efficacy of drugs use

Christina Yuen Ki Leung
The University of Hong Kong, China

Buprenorphine and Fentanyl transdermal patches are used for the management of chronic intractable pain in both malignant and nonmalignant patients. Both Buprenorphine and Fentanyl are potent opioids, but they have different pharmacology and toxicology properties. It is important to understand the difference in these properties as this information is useful for clinicians and pharmacists to use the opioid patches safely and effectively. Opioid analgesics mimic endogenous opioid peptides by causing a prolonged activation of opioid receptors (usually μ receptor). This receptor medicates analgesia, respiratory depression, euphoria and sedation. Fentanyl is potent, highly lipid soluble, rapidly acting μ-opioid receptor full agonist. Buprenorphine is a highly lipophilic semisynthetic opioid. It has complex pharmacology which is different from Fentanyl. Buprenorphine is a partial μ-opioid receptor agonist which binds to and activates a receptor, but has only partial efficacy compared to a full agonist. This means that it may have ceiling effect and demonstrate both agonist and antagonist effects. In human studies using clinical effective analgesia doses, Buprenorphine does not have a ceiling effect to analgesia. However, Buprenorphine does have a ceiling effect for respiratory depression. Hence, higher doses can be given with fewer respiratory depression side effect compared with higher doses of Fentanyl. The primary side effects of Buprenorphine are similar to Fentanyl (eg, nausea, vomiting, and constipation), but the intensity of these side effects is reduced significantly compared to full agonist, Fentanyl. The most severe and serious adverse reaction associated with opioid use is respiratory depression, the mechanism is behind fatal overdose. Buprenorphine behaves differently than Fentanyl in this respect, as it shows a ceiling effect for respiratory depression. Buprenorphine has slowed off rate (half-life of association/dissociation is 2–5 hours). The slow dissociation from μ-receptor accounts for its prolonged therapeutic effect for treatment of pain. Respiratory depression is rare with buprenorphine, but If occurs, it can be reversed by Naloxone, often larger doses are required than Fentanyl because Buprenorphine dissociates slowly from the receptors. In conclusions, the pharmacology profile of Buprenorphine is complex but unique, and contributes to its distinct safety and efficacy when it is used under appropriate clinical indications.

Biography

Christina Yuen Ki Leung has completed two Bachelor's degrees in England, BSc Management Sciences degree followed by the BPharm Pharmacy degree. Following the registration as a Pharmacist in the UK, she has worked in different London Teaching Hospitals for 16 years. In the last 12 years in UK, she has specialized in Pediatrics (especially in PICU and Pediatric Liver), Obstetrics and Gynecology. She published two articles relating to drugs use in pediatric liver diseases in the UK Children Liver Diseases Magazine. She is also a Registered Pharmacist in Hong Kong. Since 2012, she has been working as the Senior Pharmacist (Clinical Pharmacy in Charge) at the HKU-SZH in China. She is also the Honorary Tutor at the University of Hong Kong. She delivers lectures to the Master and Undergraduate Pharmacy students relating to drugs use in Pediatrics, Obstetrics and Gynecology.

cykleung@hotmail.com

Notes:

Valeria Vinciguerra, J Pharmacol Ther Res 2017

A clinical audit of sterile medical devices: A French experience of quality and safety improvement in hospital services

Valeria Vinciguerra
Humanitas Hospital Gradenigo, Italy

Objectives: The objective of this study was to audit the quality and safe management of sterile medical devices (SMDs), to examine the pharmacist's role in a multidisciplinary team, and to provide an example of hospital staff assessment of SMDs.

Methods: SMD management was assessed using the National Agency for Support to the Performance of Health and Medical-Social Establishment tool in the Hospital Centre of Cannes, France, in August 2013. Safety policy in the healthcare establishment, and the SMD cycle in the hospital pharmacy, SMD cycle and care practices in the visceral–vascular– urological surgery care unit were evaluated by four health professionals and three hospital pharmacists. A total of 1850 references to SMDs for the hospital pharmacy and 1110 references to SMDs for the care unit were analyzed. The percentage of risk control was defined as: 0–33% 'low', 34–66% 'medium', 67–100% 'high'.

Results: Risk control was 'high' (67%) for the safety policy in the health establishment, 'high' (68%) and 'medium' (64%) for the SMD cycle in the hospital pharmacy and the care unit, respectively, and 'high' (88%) for the care practices. Good scores were obtained in both services.

Conclusions: Safety and quality standards were investigated, and satisfied. Training of health professionals and information about, and the presence of detailed procedures for safety policy and care practices showed good results. The main weak points were a deficit in IT support and a lack of procedures in the SMD cycle. The hospital pharmacist was shown to be a key figure in the multidisciplinary team.

Biography

Valeria Vinciguerra has graduated with a Pharmacy degree and a Specialization School of Hospital Pharmacy at the Turin University, in Italy. She is continuing her education attending a Master in Bioethics at the Theological Faculty of Turin. During her university and professional training, she had experiences in Hospital and most of all in Local Health Unit context. She had also some work experience in France (Paris, and Cannes), and participated at different projects with the first objective of improving the practice of the Hospital Pharmacy.

vinciguerra.valeria@gmail.com

Notes:

How do clinical pharmacists keep up-to-date with newly approved medications? Update on newly approved medications from the Food and Drug Administration (FDA) in the United States

Golden L Peters
Saint. Louis College of Pharmacy, USA

In 2016, 22 new medications were approved by the Food and Drug Administration (FDA) in the United States and there have been 31 new medications approved in 2017, thus far. The presentation will highlight each medications indication, specific mechanism of action, dosing information, contraindications, precautions, adverse drug reactions, drug interactions, special administration techniques (when needed), and potential place in current therapy. The presentation will also highlight any special patient instruction or monitoring parameters for providers to consider when prescribing these new medications. (e.g. injection techniques, priming requirements). The focus of this presentation will be to introduce new molecular entities to all attendees from around to world to help shed light on the ever growing and rapidly changing healthcare field. Reinforcing that we are all a part of the global community, despite our physical geographic location.

Biography

Golden L Peters has received his BA degree from Fontbonne University in Clayton, Missouri, USA and his Doctor of Pharmacy degree from Southern Illinois University Edwardsville in 2009. He has completed a PGY-1 Pharmacy Practice Residency in 2010 at St. Elizabeth's Hospital in affiliation with Southern Illinois University Edwardsville School of Pharmacy. He is currently an Associate Professor of Pharmacy Practice at the St. Louis College of Pharmacy. He is also a Clinical Pharmacy Specialist in Primary Care at the VA St. Louis Health Care System, John Cochran Division. He is an Editorial Board Member for Madridge Journal of Pharmaceutical Research. He has over 25 publications and more than 20 invited international presentations, spanning North America, Europe, Africa, and Asia

Golden.Peters@stlcop.edu

Notes:

Effect of low-dose oral acetylcysteine on Cisplatin-induced mitochondrial oxidative stress in patients with head and neck cancer

Patricia Moriel, Marília Berlofa Visacri, Júlia Coelho França Quintanilha, Larissa Brito Bastos, Camila de Oliveira Vaz, João Paulo de Oliveira Guarnieri, Carina Malaguti, Anibal Eugenio Vercesi and **Carmen Silvia Passos Lima**
University of Campinas, Brazil

Cisplatin anticancer drug induces mitochondrial oxidative stress and acetylcysteine (NAC) is an antioxidant that has been studied to attenuate cisplatin oxidative stress and toxicities in animal models. Objective: To evaluate the effect of low-dose oral NAC on cisplatin-induced mitochondrial oxidative stress in patients with head and neck cancer. Methods: This is a randomized double-blind placebo-controlled trial conducted with 49 patients undergoing treatment with high-dose cisplatin chemotherapy, concomitant to radiotherapy. Patients were randomly assigned and were given: (a) NAC syrup, 600 mg orally once a day at night for 7 consecutive days (two days before the chemotherapy, on the day of chemotherapy, and 4 days after chemotherapy), n = 26; or (b) Placebo, administered similarly to NAC, n = 23. Before and after five days of the chemotherapy, blood samples were collected and peripheral blood mononuclear cells were isolated to perform the MitoSox Red test, a mitochondrial O2•- marker. Results: The placebo group showed a baseline mean of 238.4 ± 206.0 M.F.I versus 297.1 ± 268.6 M.F.I in the NAC group. After first cycle of chemotherapy, placebo group showed an increase in mitochondrial O2•- (286.8 ± 263.9 M.F.I, increase of 48.4 M.F.I) and NAC group a decrease (287.4 ± 268.6 M.F.I, decrease of 9.7 M.F.I); however, there was no statistic difference between the groups (p=0.7952, Mann-Whitney test). In the second and third cycles of chemotherapy, the results were also not statically significant. Conclusion: Low-dose oral NAC did not impact on cisplatin-induced mitochondrial oxidative stress in patients with head and neck cancer.

Biography

Patricia Moriel is a full Professor in the Faculty of Pharmaceutical Science at State University of Campinas (UNICAMP), Brazil. She is leader of the Clinical Pharmacy Group that is involved in the study of pharmacotherapy, drug adverse events, pharmacovigilance, pharmacokinetic e pharmacogenomics influences in adverse events, especially in cancer. She has authored more than 45 research articles, awards, conferences and the granting of a research projects. She has been director of several works of Master in medical and pharmaceutical science and doctoral theses

patricia.moriel@fcf.unicamp.br

Notes:

Patrick Viet-Quoc Nguyen, J Pharmacol Ther Res 2017

Deprescribing: Knowing when to stop

Patrick Viet-Quoc Nguyen[1,2,3]
[1]University Hospital of Montreal, CHUM, Canada
[2]CHUM Research Center, Canada
[3]Quebec Network for Research on Aging, Canada

Drug therapy is part of the treatment of most illnesses. Medication has great potential benefits reducing symptoms, disease progression, mortality and morbidity. The use of medication also increases the risk of harm through adverse reactions. Over time, people with chronic diseases and elderly people are prescribed a large number of drugs leading to polypharmacy. This may lead to an increase in drug adverse reactions due to additive effects and drug interactions. Pharmacodynamic and pharmacokinetic parameters may also influence adverse reactions. On the other hand, under prescription can cause patients to miss out on the potential benefits of useful medication. Deprescribing is an attempt to balance potential for benefits and harm by systematically withdrawing inappropriate medications with the goal of managing polypharmacy and improving outcome. Many barriers exist to deprescribing. It may come from the patient, his family and caregivers, healthcare professionals and physicians. The pharmacist has a central in deprescribing. He can raise the patient's and prescriber's awareness to polypharmacy, prescribing cascades, therapeutic duplicate, iatrogenic disease and inappropriate medications. He can recommend modification to drug to improve drug safety, compliance and reducing costs. This can be done while maintaining drug therapy efficacy in achieving therapeutic goals.

Biography

Patrick Viet-Quoc Nguyen has graduated with a Pharmacy Baccalaureate degree and a Master in advance Pharmacotherapy at the Montreal University pharmacy faculty in Canada in 2003 and 2012 respectively. He has obtained an executive MBA from the Fundesem Business School in Spain in 2008. Since 2013, he is a hospital Pharmacist specialized in the geriatrics and emergency field at the Centre Hospitalier de l'Université de Montreal (CHUM). He is a Researcher at the CHUM research centre. Since 2016, he is a Member of the Quebec network for research on aging. He has over 10 publications and teaches at the Montreal University.

patrick.nguyen@sympatico.ca

Notes:

Double-blind clinical study of the therapeutic effects of pomegranate juice powder on renal damage in diabetic nephropathy

Elnaz Faridi, Amirreza Dehghanian, Mehrdad Vosoughi, Jamshid Roozbeh and **Pouya Faridi**
Shiraz University of Medical Sciences, Iran

A large proportion of patients with type 2 diabetes mellitus have diabetic nephropathy. Despite current therapies, diabetic nephropathy progresses to end-stage renal disease in most of these patients.Therefore, it's vital to find new treatments for such patients. Oxidative stress could eventually cause inflammation, malnutrition and also activation of Transcription Nuclear Factor B leads to increment of the Production of Inflammatory Cytokines in diabetic nephropathy patients. Phenolic and flavonoid compounds which exist in pomegranate juice reduce oxidative stress and also inflammatory markers. This study was a double-blind, parallel clinical trial on 40 patients, 20 to 75 years of age. In this project, all patient's urine microalbumin and protein urine 24-hours were higher than normal and they were receiving a fixed dose of either or both ACEI or ARB at least 3 months. Patients with underlying diseases such as cancer, as well as being on dialysis were excluded. At baseline some metabolic factors and also Urine microalbumin and Urine proteine 24-houres recorded for subjects. In addition to their previous therapy, patients were received 120 placebo capsules or capsule containing pomegranate juice powder for a month. Volunteers were visited monthly and in case there was no problem they received capsules again for another 4 weeks.At the end of 8 weeks testing and initial evaluation were repeated and the changes were investigated.

In general, pomegranate juice powder had no effect on the surface of metabolic factors, However about two important indicator of diabetic nephropathy disease,urine microalbumin and urine protein 24-hours, reduced levels was detected.

Biography

Elnaz Faridi is a Pharmacist and he completed his education in Shiraz University of Medical Science. (Shiraz, Iran). And Working in Omidvar Hospital Drug store, Ewaz, Fars, for 14 months. He Participated in some congress in Iran and also in PSE congress in Murcia, Spain, in 2015 and got the award for poster presentation.

elnaz_f11@yahoo.com

Notes:

Medication management of chronic pain: A comparison of 2 care delivery models: Pharmacist + Physician team compared to a solely physician model

Marlene Slipp
Central Alberta Pain and Research Institute, Canada

Background: The prevalence of chronic pain is high and increasing. Medication management is an important yet challenging component of chronic pain management. There is a shortage of physicians who are available and comfortable providing this service. In Alberta, pharmacists have been granted an advanced scope of practice. Given this empowerment, their availability, training and skill set, pharmacists are well-positioned to play an expanded role in the medication management of chronic pain sufferers.

Objective: The objective of this study was to compare the effectiveness and cost of a physician only versus a pharmacist-physician team model of medication management for chronic nonmalignant pain sufferers.

Method: Demographic and prospectively gathered outcome data were analyzed of 89 patients who had received exclusively medication management for chronic nonmalignant pain at a rural Alberta multidisciplinary chronic pain management clinic. For 56 of the patients, all medication management services had been provided by a physician only. 33 of the patients had received medication management by a team comprised of a pharmacist and physician. In the team model, the physician did the medical assessment, diagnosed the type of pain and established a treatment plan in consultation with the patient and pharmacist. The pharmacist then provided the ongoing follow up including education, dose titration, side effect management and consulted with the physician as needed. Change in pain (Numerical Rating Scale) and disability (Pain Interference Questionnaire) over the course of treatment were recorded. The treatment duration and number of visits were used to calculate cost of care. Cost-effectiveness (treatment cost/improvement) was calculated. Outcome variables were analyzed using an Analysis of Variance.

Results: Patients treated by the physician only model had suffered with pain longer and perceived themselves to be significantly more disabled prior to treatment. Both the physician only and the pharmacist-physician team model of medication management resulted in significant and comparable improvements in pain, disability and patient perception of medication effectiveness. Patients in the physician only group were seen more frequently and at a greater cost. The pharmacist-physician team approach was markedly more cost-effective, and patients expressed a high level of satisfaction with their medication management.

Conclusions: The pharmacist-physician team model of medication management results in significant reductions of pain and disability for chronic nonmalignant pain sufferers at a reduced cost and is well accepted by patients.

Biography

Marlene Slipp graduated from the University of Alberta in 1982 with a Bachelor of Science in Pharmacy. The following year she completed a residency in Hospital Pharmacy at Victoria Hospital in London Ontario. Her residency project won the Upjohn Pharmaceutical award. She has continued her career in hospital pharmacy at the Red Deer Hospital and the Lacombe Hospital as well as working at CAPRI (Central Alberta Pain & Research Institute). She was honored to receive an Alberta Pharmacy “Centennial Award of Distinction” in 2011.

Marlene.Slipp@albertahealthservices.ca

Notes:

Chinese centralized intravenous admixture service (CIVAS): An emerging pharmaceutical industry-survey of the recent advances of CIVAS in China

Xianghong Liu
Shandong University, China

Purpose: The results of the survey involving 97 centralized intravenous admixture service (CIVAS) centers in China are described to give a review of the recent advances of Chinese CIVAS.

Methods: 103 CIVAS centers in first- or second-class Chinese hospital settings were surveyed by e-mail questionnaire.

Results: In this survey, the response rate was 94% (97 centers responded). For the scale and output issues, large CIVAS centers with daily output of more than 10 thousand bags accounted for 10% while the per workbench and per square meter output varied dramatically among different centers. For personnel structure, 80% CIVAS centers chose the combination model of pharmacy and nursing. For CIVAS operation model, more than 80% centers adopted the drug centralized compounding model.

Conclusion: CIVAS centers are playing important roles in Chinese hospital pharmacy and have developed into an emerging pharmaceutical industry while the development of Chinese CIVAS centers presents highly diversity. For personnel structure, the pharmacy-nursing combination model is recommended while the operation model should be selected according to specific hospitals. Besides, universal guidelines for CIVAS operation and personnel training are urgently needed.

Biography

Xianghong Liu is a Professor in Pharmacy Intravenous Admixture Services, Qilu Hospital, Shandong University, and China

liuxianghongzr@163.com

Notes:

7th World Congress on

Clinical Pharmacy and Pharmacy Practice

December 07-09, 2017 | Rome, Italy

Scientific Tracks & Abstracts

Day 2






Dispensing Pharmacy and Pharma Practice | Specialist Roles in Pharmacy | Therapeutic Drug Monitoring

Session Chair
Golden L Peters
Saint. Louis College of Pharmacy, USA

Session Introduction

Title: The geriatric pharmacist: an integrated part of Geriatric team
Patrick Viet-Quoc Nguyen, University Hospital of Montreal, Canada

Title: IT enabling transfer of information between primary and secondary care
Cheryl Way, NHS Wales Informatics Service, United Kingdom

Title: Comparison of direct-acting oral anticoagulants in non-obese and obese patients with atrial fibrillation
Huyentran N Tran, Loma Linda University, USA

Title: The implementation of non-medical prescribing across Wales
Karen Hodson, Cardiff University, United Kingdom

Title: In searching of the magic bullet: The role of heme oxygenase-1 in cancer
Valeria Pittala, University of Catania, Italy

Title: Implementation of a pharmacist enhancement training program and its impact
Mona Philips, Clara Maass Medical Center, USA

Title: Cisplatin-induced human peripheral blood mononuclear cells oxidative stress and nephrotoxicity in head and neck cancer patients: The influence of hydrogen peroxide
Patricia Moriel, University of Campinas, Brazil

Title: Hydrogel-forming microneedle arrays: Potential for use in minimally-invasive lithium monitoring
Eyman Mohamed Eltayib, Alneelain University, Sudan

Title: Relative comparison of loading dose Clopidogrel (300 mg) vs. conventional dose (75 mg) in decreasing the complications of acute ischemic stroke
Sara Niafar, Islamic Azad University, Iran

Title: Title:Doxorubicin versus Idarubicin with overall survival in adult acute myeloid leukemia patients
Sherein Mahmoud Ramadan, Cairo University, Egypt

Patrick Viet-Quoc Nguyen, J Pharmacol Ther Res 2017

The geriatric pharmacist: An integrated part of geriatric team

Patrick Viet-Quoc Nguyen[1,2,3]
[1]University Hospital of Montreal, Canada
[2]CHUM Research Center, Canada
[3]Quebec Network for Research on Aging, Canada

The purpose of the pharmacist on the geriatric ward is improving patient care through drug therapy. He contributes to patient care with drug history, in planning with the physician, a patient's drug therapy including the selection of drugs, the dosage forms and frequency of use based upon the physician's diagnosis. The pharmacist contributes to medical students and residents training giving the pharmacist unique view on drug therapy. He participates in teaching sessions and medical rounds. The pharmacist is a member of the multidisciplinary team. In team meetings, he helps with patient orientation by giving his professional opinion on patient ability in managing his drug therapy, drug efficacy and safety issues when necessary.

Biography

Patrick Viet-Quoc Nguyen has graduated with a Pharmacy Baccalaureate degree and a Master in advance Pharmacotherapy at the Montreal University pharmacy faculty in Canada in 2003 and 2012 respectively. He has obtained an executive MBA from the Fundesem Business School in Spain in 2008. Since 2013, he is a hospital Pharmacist specialized in the geriatrics and emergency field at the Centre Hospitalier de l'Université de Montreal (CHUM). He is a Researcher at the CHUM research centre. Since 2016, he is a Member of the Quebec network for research on aging. He has over 10 publications and teaches at the Montreal University.

patrick.nguyen@sympatico.ca

Notes:

IT enabling transfer of information between primary and secondary care

Cheryl Way
NHS Wales Informatics Service, United Kingdom

A number of studies have identified the risks to patients when information about changes to their medication are not communicated from secondary to primary care in a timely manner. In Wales national IT systems have been developed to share this information and thus reduce these risks. As well as sending discharge information to patients' GPs, the medicines information can be shared with the patient's chosen community pharmacy. The pharmacist is then able to use this information, as part of the discharge medicines review service, to reconcile the medicines prescribed on discharge with those prescribed by the GP. Any differences are then resolved, avoiding potential patient harm. This technology is being implemented in hospitals and community pharmacies across Wales with ongoing evaluation in place to determine the impact of the developments on patient care.

Biography

Cheryl Way has completed his graduation in Pharmacy from Cardiff University School of Pharmacy and Pharmaceutical Sciences, MSc in Healthcare Management from University of South Wales. Health Foundation Leader for Change. He has received his Certificate in Leadership for Collaboration from Cardiff Metropolitan University. He is a Principal Pharmacist for Cardiff and Vale University Health Board.

Cheryl.Way2@wales.nhs.

Notes:

Comparison of direct-acting oral anticoagulants in non-obese and obese patients with atrial fibrillation

Huyentran Tran, Dimpa Choksi, Rebecca Tran and **Elvin Hernandez**
Loma Linda University, USA

Introduction: Currently, there are four direct-acting oral anticoagulants (DOACs) approved in the United States. While dabigatran is a direct thrombin inhibitor, rivaroxaban, apixaban, and edoxaban are factor Xa inhibitors. Though DOACs exhibit predominately renal elimination, there is limited evidence regarding safety and efficacy of these agents in the obese population.

The purpose of Study: The purpose of this research is to add to current literature regarding the safety and efficacy of DOACs in obese patients with atrial fibrillation (AF), as to date, there is no study that has specifically studied this population.

Study Design: This retrospective, observational study included adults prescribed a DOAC between January 1, 2010 and September 30, 2016 in a multi-disciplinary outpatient AF clinic at a large academic medical center.

Methods: The primary objective is to compare incidence of thromboembolic or bleeding events in patients with AF with body mass index (BMI) <30 kg/m2 to patients with BMI≥30 kg/m2. Secondary objectives are to compare the incidence of events with each DOAC separately. Pearson Chi-Square and Fisher's Exact Test were used when appropriate.

Results: Preliminary data consists of 344 patients. The primary composite endpoint of thromboembolic and bleedings occurred in 44 (27%) of patients with BMI <30 kg/m2 versus 32 (18%) patients with BMI ≥30 kg/m^2 (p=0.038). In a subgroup analysis of dabigatran, stroke or bleed rate was 22% (n=4) in non-obese patients versus 11% (n=2) in obese patients (p=0.37). In the rivaroxaban group, stroke or bleed rate was 29% (n=18) in non-obese patients versus 20% (n=19) in obese patients (p=0.22). In the apixaban group, stroke or bleed rate was 27% (n=22) in non-obese patients versus 16% (n=11) in obese patients (p=0.11). In the edoxaban group, there was one event in each arm.

Conclusion: Preliminary data suggests patients with BMI ≥30 kg/m2 do not have higher incidence of thromboembolic or bleeding events when compared to patients with BMI <30 kg/m^2.

Biography

Huyentran Tran has received her Doctor of Pharmacy degree from Loma Linda University School of Pharmacy (LLUSP) in 2010. She has completed a PGY1 Pharmacy Practice Residency at Desert Regional Medical Center in Palm Springs and a PGY2 Cardiology Specialty Residency at LLUSP. She has joined the LLUSP faculty in 2012. Currently, she participates in a multidisciplinary collaborative team at LLU International Heart Institute and LLU Medical Center to provide comprehensive care for patients with cardiovascular disorders and serves as a preceptor for students and residents. She is the Coordinator of LLU PGY2 Cardiology Pharmacy Residency Program.

huytran@llu.edu

Notes:

The implementation of non-medical prescribing across Wales

Karen Hodson, Rhian Deslandes, Professor Molly Courtenay, Riyad Khanfer, Gail Harries-Huntley, Anthony Pritchard, Elizabeth Williams, Gary Morris and **David Gillespie**
Cardiff University, United Kingdom

Developing the roles of healthcare professionals is key to modernizing the National Health Service and Non-Medical Prescribers (NMP) are a relatively new innovation which is key to this modernization. Since their introduction 14 years ago, 29,000 nurses, 3875 pharmacists and several hundred allied health professionals across the United Kingdom have become qualified to prescribe. Independent prescribers have the most extended prescribing rights in the world and can prescribe practically any medicine for any condition provided that it is within their area of competence. There is growing evidence that NMPs contribute to improved services in a number of ways including greater choice and access for patients, better use of time and skills within the healthcare team and improved patient care. There is a lack of evidence available with regards to the extent to which NMPs have been embedded within organizations across Wales. This presentation will provide an overview of non-medical prescribing across Wales and discuss the facilitators and barriers to the implementation and sustainability of this development. The presentation will also include developments in this area elsewhere in the UK.

Biography

Karen Hodson has completed her BSc, Pharm, MSc in Clinical Pharmacy and PhD. She is the Program Director for the Cardiff University and since its initiation in 2006, and the Program Director for the Pharmacist Independent Prescribing program. In addition to these, she is also involved in delivering the MPharm and other post-qualification programs. She has been actively involved in many research activities from practice based undergraduate projects to supervising over 50 MSc projects, as well as larger scale projects. Her current research interests include technology to enhance communication between the primary/secondary care interface and non-medical prescribing.

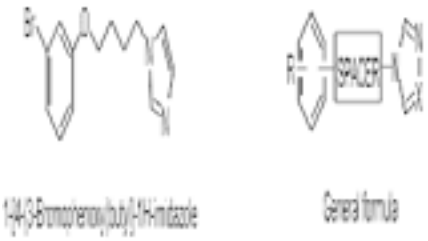
hodsonkl@cardiff.ac.uk

Notes:

In searching of the magic bullet: The role of heme oxygenase-1 in cancer

Valeria Pittalà
University of Catania, Italy

Heme Oxygenases (HO) are family of microsomial enzymes that catalyze heme regiospecific catabolism. HO-1 overexpression is detected in many cancers and its selective inhibition is acknowledged as a new therapeutic opportunity. The first generation of HO-1 inhibitors were soon discontinued due to their pharmacological profile. In the search of HO-1 inhibitors with novel chemical structure, proprietary azole-based compounds were reconsidered as HO-1 inhibitors. Basing on virtual screening results, we tested a compound library possessing two key-features: a N-3 imidazole nitrogen able to coordinate heme ferrous iron and a hydrophobic moiety (Fig. 1). Biological assays revealed high inhibitory activity towards HO-1 and, for some derivatives towards HO-2. Chemical optimization of azole-based derivatives was performed, and most potent compounds were studied for their antitumor properties in different cancer cell lines (imatinib-resistant LAMA-84 R, DU-145, PC3, LnCap, MDA-MB-231, and MCF-7) with highly promising results. Some compounds were able to restore imatinib sensitivity in LAMA-84 R cells. Preliminary results of in vivo studies will be presented. Moreover, new potent and specific ligands for HO-1 and/or HO-2 have been identified. Formulation strategies including nanoparticles have been used to improve pharmacological profile of some selected derivatives and will be the object of the present talk. Finally, elucidation of HO-1 inhibition role in tumor will guarantee useful therapeutic applications in cancer therapy.



1-[4-(3-Bromopropoxy)butyl]-1H-imidazole — General formula

Biography

Valeria Pittalà has completed her MSc in CTF, PhD in Pharmaceutical Sciences at the University of Catania (Italy), and joined Pharmacia Corporation. There she has worked as Member of Combinatorial Chemistry Group, contributed to the discovery of Danusertib, currently under clinical investigation, being Co-Inventor of Bicyclopyrazoles class. Subsequently, she has returned to the University of Catania as Medicinal Chemistry Professor. She is highly motivated drug discovery Scientist and project Leader with proven leadership capability, interpersonal skill, and independence in achieving given objectives. She has published over 60 patents and peer-reviewed papers in reputed journals and has been serving as an Editorial Board Member of repute.

vpittala@unict.it

Notes:

Implementation of a pharmacist enhancement training program and its impact

Mona Philips
Clara Maass Medical Center, USA

Background: Pharmacists are members of the patient care team, responsible for overseeing optimal, safe, and cost-effective pharmacotherapy to improve patient care. The American College of Clinical Pharmacists (ACCP) and Society of Critical Care Medicine (SCCM) outline recommendations for pharmacy practice, ranging from fundamental (drug distribution, prospective evaluation of drug safety and efficacy, etc.) to optimal services (providing formal educational services, etc.). These guidelines promote the advancement of the specialist role, but can serve as the framework to promote overall pharmacist development.

Objective: The objective of this study was to quantify and evaluate pharmacist dual responsibilities.

Methods: A novel, voluntary skills enhancement program was implemented at a community hospital pharmacy. Didactic material, advanced training (e.g. Board Certification, ACLS), formal and informal mentorship were provided. Concurrent with dispensing functions, pharmacists participated in multi-disciplinary patient care teams, emergency responses, and patient counseling activities. Data was collected using a web-based documentation tool. Descriptive statistics were used to evaluate interventions, including patient education, healthcare provider education, adverse medication events prevented as well as turnaround time and other pharmacy metrics.

Conclusion: The pharmacist enhancement program expanded skillset positively affected outcome measures and improved healthcare delivery within our facility

Biography

Mona Philips received her Bachelor of Science in Pharmacy Degree in 1987 from Long Island University School of Pharmacy; Brooklyn, New York. She received Master's in Administrative Science Degree in 2003 from Farleigh Dickinson University; Teaneck, New Jersey. She is currently employed as the Director of Pharmacy in Clara Maass Medical Center in Belleville, New Jersey. She serves on a multitude of Committees within the hospital and serve as a pharmacy preceptor, leader, and mentor to many pharmacists, students and pharmacy residents. She started a PGY1 Pharmacy Residency Program in 2006 with one resident and has expanded the program to two residents in 2014.

Mona.Philips@rwjbh.org

Notes:

Cisplatin-induced human peripheral blood mononuclear cells oxidative stress and nephrotoxicity in head and neck cancer patients: The influence of hydrogen peroxide

Patricia Moriel, Júlia Coelho França Quintanilha, Marília Berlofa Visacri, Vanessa Marcilio de Sousa, Larissa Brito Bastos, Camila de Oliveira Vaz, João Paulo de Oliveira Guarnieri, Carina Malaguti, Anibal Eugenio Vercesi and **Carmen Passos Lima**
University of Campinas, Brazil.

Cisplatin is a widely used chemotherapeutic in the treatment of head and neck cancer. However, its use is restricted due to cisplatin's nephrotoxicity caused by oxidative stress. The aim of the study was to characterize oxidative stress in peripheral blood mononuclear cells and its effect in nephrotoxicity induced by cisplatin. It was a prospective clinical and observational study at a hospital in Brazil. Before and after five days of the chemotherapy were collected blood of twenty-four patients to the realization of the MitoSox Red, H2DCF-DA and Amplex Red tests to determinate oxidative stress. Renal function was expressed in serum creatinine, creatinine clearance, and blood urea nitrogen (BUN). Serum creatinine and creatinine clearance were classified by CTCAE. No test showed significant variation after chemotherapy. Serum creatinine varied from 0.8 ± 0.2 to 1.6 ± 1.1 mg/dL ($p < 0.001$); creatinine clerance from 100.0 ± 24.4 to 57.0 ± 25.8 mL/min ($p < 0.001$); BUN from 26.2 ± 7.8 to 61.7 ± 28.4 ($p < 0.001$). H_2O_2 production was correlated with greater variations of serum creatinine ($p = 0.004$) and were associated with higher grades of toxicity of serum creatinine ($p = 0.004$) and creatinine clearance ($p < 0.001$). A linear regression analyses showed a significant univariate with a positive relation between H_2O_2 production and serum creatinine ($p = 0.013$), creatinine clearance ($p = 0.046$), and BUN ($p = 0.032$); and a significant multivariate positive relation between H_2O_2 production and BUN ($p = 0.040$). In conclusion, H_2O_2 was related with changes in all the renal parameters.

Biography

Patricia Moriel is a full Professor in the Faculty of Pharmaceutical Science at State University of Campinas (UNICAMP), Brazil. She is leader of the Clinical Pharmacy Group that is involved in the study of pharmacotherapy, drug adverse events, pharmacovigilance, pharmacokinetic e pharmacogenomics influences in adverse events, especially in cancer. She has authored more than 45 research articles, awards, conferences and the granting of a research projects. She has been director of several works of Master in medical and pharmaceutical science and doctoral theses

patricia.moriel@fcf.unicamp.br

Notes:

Hydrogel-forming microneedle arrays: Potential for use in minimally-invasive lithium monitoring

Eyman Mohamed Eltayib[1,2], **Ryan F Donnelly**[3] and **James C McElnay**[3]
[1]Ahfad University for Women, Sudan
[2]Alneelain University, Sudan
[3]Queen's University Belfast, United Kingdom

This work describes hydrogel-forming microneedle (s) (MN) arrays for minimally-invasive extraction and quantification of lithium *in vitro* and *in vivo* for the first time. MN arrays, fabricated from aqueous blends of hydrolyzed poly (methyl-vinyl ether-co-maleic anhydride) and crosslinked by poly (ethyleneglycol), imbibed interstitial fluid (ISF) upon skin insertion. Such MN were always removed intact. In vitro, mean detected lithium concentrations showed no significant difference following 30 min MN application to excised neonatal porcine skin for lithium citrate concentrations of 0.9 and 2 mmol/l. However, after 1 h application, the mean lithium concentrations extracted were significantly different, being appropriately concentration-dependent. In vivo, rats were orally dosed with lithium citrate equivalent to 15 mg/kg and 30 mg/kg lithium carbonate, respectively. MN arrays were applied 1 h after dosing and removed 1 h later. The two groups, having received different doses, demonstrated no significant difference between lithium concentrations in serum or MN. However, the higher dosed rats demonstrated a lithium concentration extracted from MN arrays equivalent to a mean increase of 22.5% compared to rats which received the lower dose. Hydrogel-forming MN clearly have potential as a minimally-invasive tool for lithium monitoring in outpatient settings. Future research will focus on correlation between serum and MN lithium concentrations.

Biography

Eyman Mohamed Eltayib is Assistant Professor of Pharmaceutics at School of Pharmacy, Ahfad University for Women and Head of Pharmaceutics Department Faculty of Pharmacy, Alneelain University. She has received her Bachelor in Pharmacy from Faculty of Pharmacy, University of Khartoum (2004) and Master's degree in Clinical Pharmacology from Faculty of Pharmacy, University of Medical Sciences and Technology (2008). Her PhD in Pharmacy from School of Pharmacy, Queen's University of Belfast (2016) under the supervision of Professor Ryan F Donnelly.

eeltayib01@qub.ac.uk

Notes:

Relative comparison of loading dose Clopidogrel (300 mg) vs. conventional dose (75 mg) in decreasing the complications of acute ischemic stroke

Sara Niafar[1], **Samaneh Haghighi**[2] and **Mohammadreza Gheini**[2]
[1]Islamic Azad University, Iran
[2]Tehran University of Medical Sciences, Iran

Background & Aim: Stroke is one of the leading causes of morbidity and mortality in the world. Patients surviving acute ischemic stroke or transient ischemic attack (TIA) are at an increased risk for subsequent stroke. Consistent with this notion, Antiplatelet agents are the mainstay for secondary prevention of non-cardio embolic stroke. A number of studies have indicated that Clopidogrel inhibits platelet aggregation in these patients, so that Clopidogrel loading dose has been more effective than maintenance dose in reducing the risk of subsequent stroke and vascular events without increasing the risk of bleeding events in patients which have already had an episode of stroke or TIA. In this study, we aimed to evaluate the comparative efficacy of Clopidogrel loading dose vs. standard dose in decreasing the complications of acute ischemic stroke in patients admitted to Sina Hospital.

Methods & Materials: In this double-blinded clinical trial, 76 patients with ischemic stroke referring to Sina hospital were assigned in two groups: The first group received Aspirin 80 mg and Clopidogrel 75 mg plus 225 mg placebo at baseline, followed by Clopidogrel 75 mg and Aspirin 80 mg daily for 30 days, whereas the second group received Aspirin 80 mg and Clopidogrel 300 mg in the first day, followed by Clopidogrel 75 mg and Aspirin 80 mg daily for 30 days. Two weeks later, improvement of the patients was compared. All patients were monitored for neurologic deterioration to detect symptomatic ICH within 7 days after stroke. Also, they were followed for any new bleeding event and recurrent stroke within 1 month.

Results: In this study, 76 patients, including comprising 41 males (53.9%) and 35 women (46.05%), mean age 67.45±6.85 years were evaluated. The difference between the two groups in terms of age, sex, and risk factor of stroke was not statistically significant. Based on MRS and Barthel scores, the level of improvement after 2 weeks was remarkably higher than the group received loading dose Clopidogrel compared to that of standard dose ($P < 0.05$). The correlation between NIHSS, MRS, and Barthel scores with age, sex, and the risk factor of ischemia were not statistically significant ($P > 0.05$). Besides, the frequency of symptomatic ICH or any bleeding event in the group taken the loading dose Clopidogrel was not significantly higher than those received standard dose ($P = 0.43$)

Conclusion: Our data have shown that administration of loading dose Clopidogrel after ischemic stroke (within 24 hours), not only augmented neurologic improvement as well as daily activities in patients with acute ischemic stroke, but also did not increase the risk of hemorrhagic complications.

sara_niafar_mdc@yahoo.com

Notes:

Doxorubicin versus Idarubicin with overall survival in adult acute myeloid leukemia patients

Sherein Mahmoud Ramadan Abdalla, Sherif HA, Rashed R, Rabea A and **Elshesheni HA**
Cairo University, Egypt

Objective: The main aim of this retrospective case control study is to compare the response to doxorubicin or idarubicin in adult AML patients during the induction treatment related to patients of the Egyptian National Cancer Institute (NCI).

Patients and methods: 143 patients from 18 to 60 years of age with de novo AML were studied. We study the patients who were admitted in the NCI from January 2013 to January 2016. Standard induction therapy with 3+7. Cytarabine had to be given in a dose of 100 mg /m2/day continuous for 7 days; anthracyclines are given for 3 days being either doxorubicin (DXR) 45 mg /m2 or idarubicin (IDR) 12 mg /m2. Patients were not eligible if they had Promyelocytic leukemia.

Results: Of the 143 patients, 97(67.8%) achieved CR. Of the 67 patients in the IDR group, 46 (68.7%) achieved CR, and of 76 in the DXR group, 51 (67.1%) obtained CR (P=0.8386). In the IDR group, 41 patients (61.2%) achieved CR after the first course, and in the DXR group, 46 (60.5%) did so (P =0.9320). Early death occurred in 15 (22.3%) in the IDA arm and 24 (31.5%) in the DOXO arm which was not statistically significant (P=0.2189). 91 patients reached CR, 31 patients experienced relapse, 15 patients in the IDA arm and 16 patients in the DOXO arm. The median OS was 8 months in IDA arm vs. 6 months in DOXO (P=0.292). Of 67 patients in the IDR group, 41(61.2%) achieved CR by one induction cycle which cost 4296 EGP/patient (for IDR only) while in the DXR arm, 46(60.5%) obtained CR by one induction cycle which cost 946 EGP/patient (for DXR only).

Conclusion: Patients who received IDR/Ara-C had no significant difference compared with those who received DXR/Ara-C as regards to CR rate, adverse events, and incidence of relapse. DXR/Ara-C was effective in adult patients less than age of 60 with newly diagnosed AML. The low cost of DXR compared to IDR added value in the treatment's total cost is important specially for developing countries like Egypt.

sherein14@hotmail.com

Notes: