

International online Conference on Pharmacovigilance and clinical Research

(IOCPCRPCR-2020)

In association with

Indian Pharmaceutical Association,
Kolhapur Branch



1 & 2 August 2020

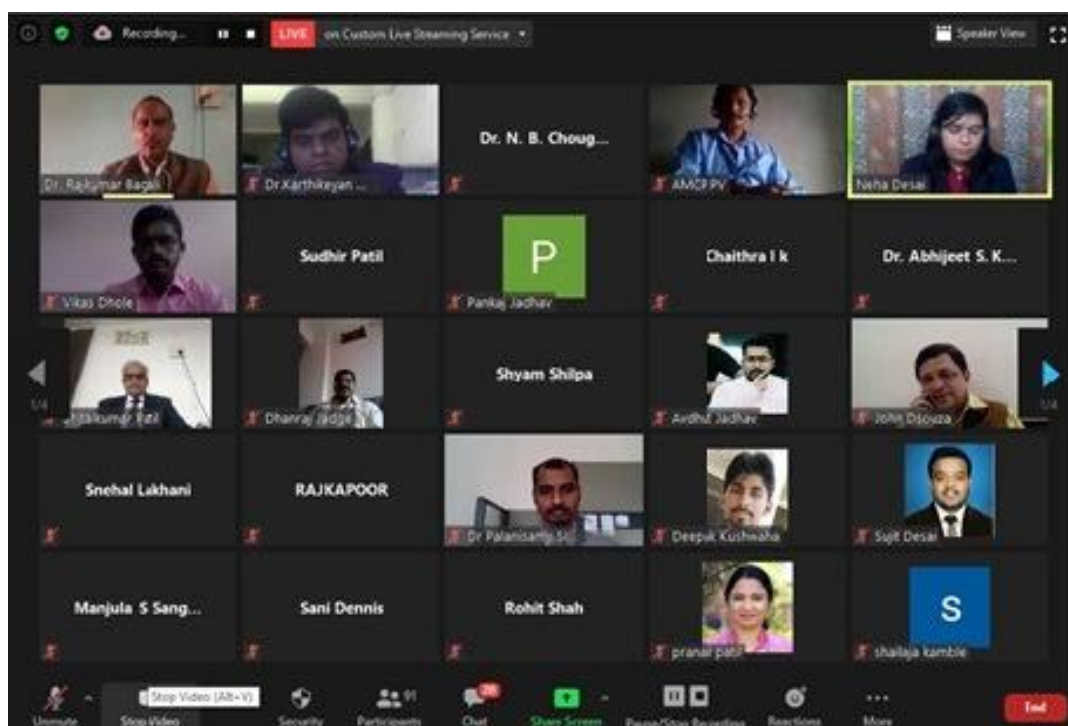
ABSTRACT BOOK

Organized by

Ashokrao Mane College of Pharmacy, Peth Vadgaon,
Maharashtra.

Contact: 8788185450, 9656111669 / Email: conference@amcoph.org

About Conference



The International online Conference on Pharmacovigilance and clinical Research organized by Ashokrao Mane college of Pharmacy Peth Vadgaon Maharashtra was held on 1 & 2 August 2020.

In this pandemic situation, Ashokrao Mane college of Pharmacy Peth Vadgaon, Shivaji University, Kolhapur, Maharashtra has come up with an International online Conference on Pharmacovigilance and Clinical Research in collaboration with Indian pharmaceutical Association, Kolhapur Branch and e poster presentation competition.

In this event, around 1200 participants have participated from 25 states and union territories across the country and there were participants from 9 other countries such as Malaysia, Mauritius, Kenya, Saudi Arabia, Oman, Nigeria, Kingdom of Bahrain, Philippines and Ethiopia. In this conference, Pharma students, Pharmacovigilance professionals, Clinical research Professionals, Research scholars, Academicians, Regulatory affairs professionals, Medical coders, Drug safety experts, Drug Control officers, Health care professionals, Pharmacist, and allied industries have participated.

The conference was inaugurated by Convener and Principal Dr. S. S. Patil. In the inaugural speech, Dr. S. S. Patil addressed about prevention of patient hazards, improvements in public health, and precise evaluation and monitoring of drug safety are crucial. He also said knowledge from such a conference will be useful in the future career of participants.

The Chief coordinator of the Conference, Dr. R. S. Bagali, delivered the keynote address and Coordinator Dr. Karthikeyan M welcomed the Participants and emphasized the importance of the conference. The eminent guest Dr. John D'Souza, President of Indian Pharmaceutical

Association Kolhapur and Dr. D. R. Jadage Principal womens College of Pharmacy, Peth vadgaon was present for the Inaugural function.

On the first day, first session an eminent speaker, Dr. Palanisamy Sivanandy, school of Pharmacy, international university of Medical University, Malaysia delivered an informative lecture on “Essential of Pharmacovigilance for the safety of people” and said that Pharmacovigilance (PV) plays a key role in the healthcare system through assessment, monitoring, and discovery of interactions amongst drugs and their effects in human. This session chaired by Dr. N. B Chougule, Principal, Ashokrao Mane Institute of Pharmacy, Ambap.

The second session was enriched with the lecture “Opportunities for Pharmacy Graduates in Pharmacovigilance” by Dr. Sachin Supale, Manager Medical writing- Cognizant technology solution, Pune Maharashtra. This session chaired by Dr. A. S. Kulkarni, Principal, Ashokrao Mane Institute of Pharmaceutical Sciences and Research, Save, Maharashtra.

On the second day, in the first session, online e Poster presentation competition was held, where a total of 36 posters were presented by the main author on a topic Pharmacovigilance and clinical Research from across the Nation and abroad too. The results of E poster competition are as Position 1: Christan M, of C.L.Baid Metha College Of Pharmacy, TamilNadu; Position 2: Mohd Firdaus Bin Abdullah, from University of Malaya Medical Centre, Malaysia and Position 3: Rajalakshmi Rukmangathen from Sri Venkateswara Medical College, Andhra Pradesh. E-Posters Evaluation was done by Dr.T. Balasubramanian, Dr.Khatib, and Dr. Shalavadi.

The second session includes lectures on "Pharmacoeconomics and outcome Research ” by Dr. Dixon Thomas, Associate Professor and Chair, Department of Pharmacy practice, Gulf University, UAE where he briefed how Pharmacoeconomics helps us to make decisions about the use of medicines. This session chaired by Dr. V. R. Aralelimath, Principal, Shri Santkrupa College of Pharmacy, Gurgaon, Maharashtra. The conference anchoring was done by Ms. Neha Desai and the IT section handled by Mr. Jaykar Jagtap.

In the valedictory function, the winning contestants were given E-certificates by dignitaries through online mode. In the end, the conference was concluded with the Vote of thanks by Mr. V. R. Dhole, Co-Coordinator of IOCPCRPCR, he expressed his gratitude to the Hon. President Shri. Vijaysinh Mane and ZP member Hon Mrs. Manisha Mane for constant support and encouragement for the successful organization of the conference.

Abstract Index

Paper Code	Title	Presenting Author
IOCPCRPCR01	A study of nootropic activity of some herb – drug combinations in laboratory animals	Pradip Shivaji Koli
IOCPCR02	Impact of hypertensive disorders in pregnancy and Clinical pharmacist interventions for its management	Amina Seena.C
IOCPCR03	Latest trends in Case processing	Komuravelly Shravani
IOCPCR04	Importance of IL4,C3,C4 in patient with systemic lupus erythematosus	Vismaya.V
IOCPCR05	A case report on Dravet syndrome in a 4.5 year old child	Lini Varghese
IOCPCR06	Assessment Of Nutrition On Cognitive Function Among Older Adults - A Community Dwelling Study	Sandeep Chandakavate
IOCPCR07	Artificial Intelligence (AI) and Machine learning (ML) based prediction of Immunogenicity and reactogenicity of Vaccines	C.Stalin
IOCPCR08	Melatonin: A Modulator Of Ovarian Endometrioma	Piyali Mazumdar
IOCPCR09	Monitoring, Reporting and Evaluation of various Adverse Drug Reaction(ADR) Under Pharmacovigilance Programme of India(PvPI) in a Tertiary Care Cardiac Hospital, Tamil Nadu	Christan M
IOCPCR10	Comprehensive Evaluation Of Medication Error Incidence In A Tertiary Care Hospital	Neena Priyamalar E M
IOCPCR11	Medication Reconciliation During Discharge To Improve The Transitional Care In A Tertiary Care Hospital	Shilpa . R
IOCPCR12	Pancreatic Cancer Related to Glucagon-like peptide-1 Analogues: A Post-marketing Analysis of Spontaneous Cases Reported in EudraVigilance Database	Ghanshyam Mali
IOCPCR13	Clinical characteristics of 1000 death cases: A Cross-sectional study of COVID-19 Mortality in Tamil Nadu	K. Meghana
IOCPCR14	Future Challenges of Pharmacovigilance	Shubham Gajanan Suryawanshi
IOCPCR15	Clinical Research on Cancer and It's Advance Therapy	Ramyani Mukherjee
IOCPCR16	Knowledge, Attitude and Practice of Health Care Professionals Towards Deaf Patient Services	Mohd Firdaus Bin Abdullah

IOCPCR17	Impact of Uremic Toxins on the prognosis of End Stage Renal Disease patients	Haritha.H
IOCPCR18	Analysis Of Adverse Drug Reactions In Pediatric Patients Reported At ADR Monitoring Center	Rajalakshmi Rukmangathen
IOCPCR19	Knowledge, Attitude And Practice Of General Public Of Muscat Region Towards The Chronic Disease Hypertension	Dhanalekshmi UM
IOCPCR20	A Study On The Paramountcy Of Ceaseless Education , Awareness And Training Of Pharmacovigilance In India	Gauthem K Pillai
IOCPCR21	Pharmacovigilance And Its Importance-A Review	Sarath Kumar S J
IOCPCR22	Yogic Management Of Covid Fear And Stress Among Elderly	Akila Shanmuga Sundarama
IOCPCR23	Pharmacovigilance The Need Of The Hour: Way Toward A Safe Medical Practice	Jyoti Sadashiv Dudhane
IOCPCR24	Insilico docking studies of a series of Indolo[2,3-c] quinolines as PDE5 inhibitors	Padma Bhavani Borra
IOCPCR25	Structure Based Drug Design, Synthesis and Evaluation of Noval CLK1A Inhibitors as Anti-Alzheimers	Ravindra Mishra
IOCPCR26	Validation of the hypoglycemic activity of Syzigium cumini based on scientific literature review	Sneha Antony
IOCPCR27	Nano Suspension Preparation By Doe Optimized Solvent Diffusion Method	Ashwini Joshi
IOCPCR28	A Core Scaffold Pyrazolone Fused Heterocyclic Analogues As Potent Anticancer Agent	Sumathy . A
IOCPCR29	Development of Metallic Nanoparticles to Eradicate Bacterial Biofilm for Effective Treatment of Bacterial Keratitis	Nagendra Bhuwane
IOCPCR30	Formulation and Evaluation of Bilayer tablets bearing Floating PMMA microspheres of Baclofen and Rabeprazole sodium	Asha S
IOCPCR31	Formulation and evaluation of imatinib nanosuspension	Jithin Raj
IOCPCR32	A Review On Repurposing Of Remdesivir In Covid-19	Nikhil Cherian Sam
IOCPCR33	Insilico molecular docking study of RNA dependent RNA polymerase inhibitor against COVID-19	Kaviarasu J
IOCPCR34	Teratogenicity evaluation of selected drugs on zebra fish experimental system	Pillewan S.R.
IOCPCR35	In Vitro Antioxidant Activity Of Cassia Glauca Leaves Extract	Poornima CH
IOCPCR36	Morphological effect and osmotic fragility of Red blood cell: action of a methanolic extract of lantana camara	Mayuri Patole

IOCPCR01

A study of nootropic activity of some herb – drug combinations in laboratory animals

Pradip Koli

Department of Pharmacology, College of Pharmacy, All India Shree Shivaji Memorial Society, Pune, Maharashtra, India. E mail : pradipsk2212@gmail.com

Abstract: The term "Nootropic" from the italic words “noos” (mind) and "tropein" (to turn toward), to mean enhancement of learning and memory. Learning and memory are two fundamental cognitive functions that confer us the ability to accumulate knowledge from our experiences. The aim of present work was to select a suitable Herb-Drug combination and investigate for its nootropic effect against different models of memory dysfunction. The plant *Celastrus paniculatus* is well documented for its nootropic & neuroprotective activity. Evidence for the nootropic-like action of *Celastrus paniculatus* extract with Piracetam and Memantine was obtained from the studies on an elevated plus-maze, in which mice showed a natural aversion to open and high spaces and, therefore spent more time in the enclosed arms suggesting that Inflexion Ratio might be improved if the animal had previously experienced entering the arms. The improved IR is further related to memory. In the present study, the improved IR was obtained on day 1 & 2 in the combination of *Celastrus paniculatus* (1000 mg/kg) with Piracetam (100 mg/ml), Piracetam (200 mg/ml), Memantine (10 mg/ml) and Memantine (20 mg/ml) group as compared to control group. This study consolidates the concept that *Celastrus paniculatus* in combination with Piracetam and Memantine improves acquisition as well retaining of learned task in normal mice.

Keywords : Nootropic activity, *Celastrus paniculatus* and neuroprotective activity

Impact of Hypertensive Disorders in Pregnancy and Clinical Pharmacist Interventions for its Management

Amina Seena.C , Shinu.C, Aysha Hiba K.K

Department of pharmacy practice, Al Shifa College of Pharmacy, Perinthalmanna, Kerala, India.

E mail : aaminasheena@gmail.com

Abstract: Pregnancy induced hypertension is a major cause of fetal and maternal morbidity and mortality. The incidence of pregnancy induced hypertension (PIH) is around 3-10%. The elevation of the blood pressure to $\geq 140/90$ mm Hg with or without proteinuria after 20 weeks of gestation is known as PIH. This study was done to analyze the risk factors, complications and management in women with maternal hypertension. The objective is to assess the safety and efficacy of antihypertensive and the role of clinical pharmacist in its management. Through this study the risk factors and complications of hypertensive disorders in pregnancy was also detected. A Prospective Interventional study was conducted in women with pregnancy induced hypertension. All the patients with PIH from the 20th week of gestation were collected. These patients were then followed up to delivery to identify maternal and fetal outcomes. Patient's arterial blood pressure and other laboratory parameters were analyzed. Patient counseling and leaflets were provided and medication adherence was measured before and after counseling. A total of 97 cases were collected and it was observed that age above 30, obesity, other comorbidities and previous history of hypertension were predisposing to development of hypertension during pregnancy. Labetalol was the commonly prescribed drug. Majority cases blood pressure lowered after delivery. Incidence of the Cesarean section was high. Patient's knowledge about drugs and disease improved through interventions. Patient counseling and PILS provided to all patients improve medication adherence and knowledge about the disease. Early recognition and accurate supervision of patients regarding drug use, strict fluid balance, optimum time of delivery and proper medication use and lifestyle modifications would control the consequences of this disorder.

Keywords: Hypertensive disorders, Labetalol, Medication adherence, Risk factors and Complications, Cesarean section.

Latest Trends in Case Processing

Shravani Komuravelly and Shiva Dunde

Department of Clinical Pharmacy, Vaagdevi College of Pharmacy, Hanamkonda, Warangal, Telangana, India- 506001. Email : inavarhs247@gmail.com

Abstract: In the current research, automation in case processing work flow was outlined. The intent behind the research was to show how technology is leveraging to transform the pharmacovigilance roadmap and to manage safety and risk management activities. Typically, thousands of adverse event (AE) cases are processed manually by global case processing teams, involved in data entry, quality review and medical review of individual case safety reports in the safety database. Some of these are reported on an expedited basis to regulatory authorities by submission teams. As the industries across the world are gearing up to better manage PV activities. To achieve full PV transformation, multiple stages or levels of automation are required to ensure processes are completed correctly. Starting with basic level automation, through robotic process automation, to cognitive computing and eventually leading up to Artificial Intelligence (AI), each stage involves reduced human involvement. A variety of such automation-based tools can be deployed to transform end-to-end PV processes streamlining communications and enabling real-time decision making. While available technology systems and applications automate case processing (cloud-based safety databases/systems including ARGUS and ArisG) and reporting activities to regulatory agencies conducted via electronic gateways, the overall process still requires much human intervention and manual effort, especially in the areas of case intake and data entry. By using robotic automation, cognitive computing and artificial intelligence technologies, companies can reduce the effort and spend required for safety case processing, allowing resources to focus on proactive identification, evaluation and minimization of risks. Employing automation in safety case processing will not only reduce costs and accelerate processing; it will also eliminate the chance of human error and improve quality and accuracy.

Keywords: Case processing work flow, Basic automation, Robotic process automation, Cloud-based safety databases, Artificial intelligence technologies.

Importance Of IL4, C3 ,C4 In Patients With Systemic Lupus Erythematosus

Vismaya.V

K.V.M. College of Pharmacy, Alappuzha, Kerala E mail :Vismayazz15@gmail.com

Abstract: Systemic lupus erythematosus is an autoimmune disease & a chronic systemic disease with unknown etiology influential more than 1 billion individuals each year. SLE is characterized by a paucity of tolerance to nuclear antigens & various immunological aberration, including irregular activation of both t & b lymphocytes & subsequent polyclonal activation of circulating b lymphocytes which produces a large quantity of autoantibodies & formation of immune complexes causing tissue damage. Regulation of antidna is important. Increased apoptotic neutrophils are found in SLE , related to disease activity & levels of anti – ds dns antibody that include apoptosis. The increased apoptosis mechanisms are not clear. The complement system plays a major role in SLE. SLE appears clinical involvement offensive of the joints, skin, kidney, brain , lung, heart ,serosa & gastrointestinal tract.SLE is triggered by various environmental factors in genetically susceptible individuals. Various environmental agents , toxicants like smoke, alcohol, occupationally & non occupationally related chemicals, infections,UV light , sex hormones , certain medications , vaccines have been implicated to induce SLE has amelioration significantly because of advances in the perception of molecular mechanisms involved in the pathogenesis of disease which has facilitate early diagnosis & novel therapeutic strategies.

Keywords: SLE , apoptosis, antibody, irregular activation, chronic inflammation.

IOCPCR05

A Case Report On Dravets Synrome In A 4½Year Old Child Treated With Antiepileptic Drugs

Lini Varghese

Nirmala college of Pharmacy, Kerala

Abstract : Dravets syndrome is a rare condition characterized by prolonged seizures. There will be deterioration in intellectual development in the small children. A 4½ year old child was admitted to paediatric ward at Nirmala medical centre with complaints of convulsions and fever. The child was diagnosed with dravets syndrome. The first line therapies include (valproate and clobazam), second line therapies (stiripentol, topiramate) and later options (leviteracetam). Sodium channel blockers are not used as they exacerbate seizures. This report is about the treatment of Dravets syndrome.

Key words : Dravets syndrome, antiepileptic drugs.

Assessment of Nutrition on Cognitive Function Among Older Adults - A Community Dwelling Study

Sandeep Chandakavate

BLDEA'S SSM College of Pharmacy And RC, Vijayapur, Karnataka

E mail : schandakavate61@gmail.com

Abstract: To assess the prevalence of cognitive function among the elderly study population. To evaluate the association of nutrition and cognitive function among the elderly study population. A Community based cross sectional observational study among elderly (≥ 60 years) population was conducted. A total of 400 study subjects were estimated and finally reviewed meeting with inclusion criteria. All the consented elderly subjects were assessed for nutritional status by using Mini nutritional assessment Short Form (MNA-SF) and cognitive function was measured by Min Mental State Examination (MMSE) during visit to their residence. All data extracted was analyzed statistically by chi square test. The prevalence of cognitive impairment in the current study was 45% and was significantly associated with nutrition ($p < 0.001$). Studies suggested that better healthy diet is associated with lower prevalence of cognitive decline and reduces risk of depression. Involuntary weight loss, abnormal BMI, vitamin deficiency (B12, B6 and folate), reduced dietary intake can lead to malnutrition. The current evidence of the present study also suggests that age Group (80-90 years), female elders, literacy rate and occupational status shows an incident of having cognitive impairment. The present study reveals half of the subjects associated with cognitive impairment are associated with varied level of nutritional status. Elderly with malnutrition are majorly observed with cognitive impairment as compared to subjects with good nutrition status. Thus, study concludes nutrition as a significant factor associated with cognitive functions among elderly.

Key words: Nutrition, cognitive function, community dwelling Study

Artificial Intelligence (AI) and Machine Learning (ML) Based Prediction of Immunogenicity and Reactogenicity of Vaccines.

Stalin. C and Lakshmi Prasanna .T

Patient safety- Pharmacovigilance Associate, Pharmacovigilance Programme of India (PVPI), National Coordination Centre, Indian Pharmacopoeia Commission, Ghaziabad- India.

Email: Stalinmpharm@gmail.com

Abstract: Vaccines have the capability of causing adverse and non-intentional effects. Reasons include Manufacturing process, inappropriate handling, route of administration and genetic factors. highly immunogenic vaccines usually trigger more adverse events than low immunogenic ones. The events range from mild manifestations to more severe physiological alterations that may be even fatal. Various Technology utilizing omics data and machine learning techniques are available to identify sets of genes that can predict vaccine immunogenicity. This poster will discuss about the importance and involvement of Artificial Intelligence (AI) and Machine Learning (ML) in discovering markers of vaccine immunogenicity and Reactogenicity. At the end of the presentation we will be able to understand the available techniques and that the factor how a trained system can significantly improve the accuracy and robustness of vaccine reactions.

Keywords: Vaccines, Artificial Intelligence, immunogenicity and Reactogenicity.

Melatonin: A Modulator of Ovarian Endometrioma

Piyali Mazumdar and Shampa Sarkar Biswas*

Life Science Department, Presidency University, Kolkata

E mail : piyali.maz28@gmail.com

Abstract: Melatonin hormone is primarily released by the pineal gland at night in a normal day-night cycle. The neurohormone is controlled by the endogenous circadian clock which is located in the hypothalamus of brain. Pathologically and physiologically both reproductive system and melatonin are intertwined. Ovarian endometrioma is considered to be a dynamic condition, influencing its impact by damaging the growing follicles, oocyte and embryo quality. From our review it was noted that melatonin receptors were differentially expressed in the ovarian granulosa and thecal layers which might result in different downstream regulatory processes in the ovary. Presence of melatonin receptors in the ovarian cells emphasized towards its role in the secretion of gonadal hormones. It was observed that LH was influenced by the effects of melatonin depending upon the different phases of the menstrual cycle while FSH acted cooperatively by improving the follicular development. Apparently, progesterone assisted in reversing the excessive estrogenic surge during endometriosis with the help of melatonin. Hormonal changes, inflammatory cytokines and factors related to apoptosis were responsible for changing the dynamics of the disease. Upon administration of melatonin resulted in amendment of intra-follicular oxidative balance and improvement of various oocyte and embryonic parameters. The regression of endometrial cells via caspase-3-mediated pathway by modifying the balance between matrix metalloproteinases (MMP 3) and tissue inhibitors of metalloproteinases (TIMP 3) was also evident in the presence of melatonin treatment. Although melatonin is found to be a promising candidate in reversing a multitude of abnormalities during the pathogenesis of the disease, still a plethora of other factors likely the cell type in the ovarian tissue, dosage, experimental set up, treatment timing and stages of the disease are to be considered during future experimental works.

Keywords: Melatonin, ovarian endometrioma, gonadal hormones, folliculogenesis and apoptosis

Monitoring, Reporting and Evaluation of various Adverse Drug Reactions(ADRs) Under Pharmacovigilance Programme of India(PvPI) in a Tertiary Care Cardiac Hospital, Tamil Nadu

Christan M^{*1}, Mohamed Thayub², Dr.K.M.Cherian²

¹C.L.Baid Metha College Of Pharmacy, Chennai, Tamil Nadu

²Frontier Lifeline Hospital, Chennai, Tamil Nadu

Email: christan2804@gmail.com

Abstract:The objective of the study was to monitor, evaluate and analyse various ADRs in a tertiary care hospital and to determine the causality, severity and preventability of reactions. After obtaining Institutional Ethics Committee a prospective observational study was carried out for the period of 12 months(Mar2019-Feb2019). All patients were followed up for ADRs which were evaluated for incidence, frequency, causality, severity, type of ADRs, drug classes, individual drug causing reaction, organ system affected, management and outcome of ADR. Causality was graded according to WHO-UMC scale. Severity according to Modified Hartwig and Siegel scale and preventability based on Modified Schumock and Thornton Scale. Organ System Affected by ADRs were categorized by using IBM Micromedex®. Results and Discussion: A total of 210 ADRs were reported from 4721 patients during the study period with male (64.2%) predominance over female (35.7%). Most of the reported ADRs were of type A category (87.7%). The class of drug responsible for causing more ADRs was found to be anti-hypertensive (26%) and Diuretics (18%). The most common clinical manifestations of ADRs during the research period was hypokalaemia (11.4%).The most commonly affected organ system was Endocrine metabolic (20%). The suspected ADRs were assessed for their causality, it was revealed that (33.3%) were probable, (64.2%) were possible and (5%) were unlikely. The severity was assessed and observed that (52.8%) were mild, (39%) were moderate and (8%) severe. Preventability of ADR was shown (54.7%) reaction were definitely preventable and (36.1%) reaction were probably preventable and (9%) reaction were not preventable. Involvement of a pharmacist in patient care can help in prevention and early detection of ADRs, also by detecting new and rare ADRs regulatory decision for the drugs can be made or altered.

Key words:Adverse Drug Reaction, Pharmacovigilance, Causality assessment, Severity, Preventability, Spontaneous reporting.

Comprehensive Evaluation of Medication Error Incidence In A Tertiary Care Hospital
Neena Priyamalar E M^{*1}, Naveen Kumar P¹, Mohamed Thayub²

¹C.L.Baid Metha College of Pharmacy, Chennai, Tamil Nadu

²Frontier Lifeline Hospital, Chennai, Tamil Nadu

Email: neenakiruba123@gmail.com

Abstract: Medication errors are any preventable event that may cause patient harm while the medication is in control of healthcare professional. Medication reconciliation is a process of active monitoring to reduce the severity of sequelae due to unintended medication errors. The objectives are to assess the incidence of medication errors, to evaluate percentage of error prone abbreviations, to evaluate percentage of patients admitted with adverse drug reaction. A cross-sectional observational study was conducted for a period of 6 months February to July 2019. A systematic monitoring was done by the clinical pharmacist during regular ward rounds on medication errors, error prone abbreviations, and adverse drug reactions for all the drugs. The data was collected by examining patient's case files using Medication reconciliation forms as a tool and data interpretation was done using Microsoft excel 2010. A total of 4721 prescriptions were analyzed, among which 254 medication errors were encountered (5.38%). On categorizing the same, it was observed to have 71 (27.95%) prescription errors, 5 (1.97%) administration errors, 124 (48.82%) transcription errors, 11 (4.33%) dispensing errors, 11 (4.33%) monitoring errors and 14 (5.51%) drug duplications. Apart from medication errors, 18 (0.38%) Error Prone Abbreviations and 18 (0.38%) adverse drug reactions were also noted. Medication errors can be prevented by giving attention to the medication therapy and increased involvement of clinical pharmacists in the provision of pharmaceutical care, results in improved patient outcomes and an overall reduction in health care costs. Hence Pharmacist collaborating with other health care providers will further improve patient safety.

Keywords: Medication errors, Transcription errors, Prescription errors, Error prone abbreviations, Adverse drug reactions.

Medication Reconciliation during Discharge to Improve the Transitional Care in a Tertiary Care Hospital

Shilpa.R*, Neena Priyamalar E M, Mohamed Thayub

¹C.L. Baid Metha college of Pharmacy, Chennai, Tamil Nadu.

²Frontier Lifeline Hospital, Chennai, Tamil Nadu.

Email : shilpaapr28@gmail.com

Abstract: Medication reconciliation is the comprehensive evaluation of a patient's medication regimen any time there is a change in therapy in an effort to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions, also to observe compliance and adherence patterns which is required to improve patient care and outcomes in care transitions. The objective of this study was to determine the medication discrepancies at discharge summaries in a tertiary care hospital . A retrospective cross sectional study was carried out for the period of eight months [March – November 2019]. During the study period a total of 1,956 patients were discharged among which 1,224 discharge summaries were analysed by the clinical pharmacist for discrepancies. The Data were abstracted using medication reconciliation form as tool. A total of 453 discrepancies were observed among which 417(91.44%) had at least one unintended discrepancy at the time of discharge and 36(7.94%) had more than one unintended discrepancy. The most common unintentional discrepancy was discrepant direction of use of medication 126 (27.81%), followed by discrepant frequency of medication 114 (25.16%), 93 (20.52%) were omission error, 90 (19.86%) were discrepant dose, 21(4.63%) were discrepant drug and 9 (1.98%) were commission error. Medication discrepancies in hospital discharge summaries can be easily prevented by giving attention to the medication therapy and increased involvement of clinical pharmacists in the provision of pharmaceutical care, results in improved patient outcomes and an overall reduction in health care costs. Hence Pharmacist collaborating with other health care providers will further improve patient safety and the medication reconciliation process.

Keywords : Reconciliation, Medication discrepancy, Medication error, pharmacist, discharge

Pancreatic Cancer Related to Glucagon-like peptide-1 Analogues: A Post-marketing Analysis of Spontaneous Cases Reported in EudraVigilance Database

Ghanshyam Mali¹, Vivek Ahuja¹, Kiran Dubey¹

¹Department of Pharmacology, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi, India – 110062

²MACR and Global Pharmacovigilance, Sun Pharmaceutical Industries Limited, Gurugram, India 122015 E Mail : ghanshyam.mali2@gmail.com

Abstract: There have been concerns about risks for pancreatitis and pancreatic cancers with Glucagon-like peptide-1 (GLP-1) analogues. Spontaneous reporting systems have been used as a crucial method of postmarketing drug safety surveillance. Our objective was to detect from the European pharmacovigilance database i.e., EudraVigilance (EV), a signal of pancreatic cancer with GLP-1 analogues. Herein, we analyzed all reports of pancreatic cancer reported with all GLP-1 analogues in EV database from their inception till 30th January 2020. The cases were identified with Medical Dictionary for Regulatory Activities (MedDRA) version 22.1. A case/noncase method was used to detect the association, calculating proportional reporting ratios (PRRs) and their 95% confidence interval (CI) as a measure of disproportionality. This method is used to detect safety signals in pharmacovigilance databases. In EudraVigilance database, to generate a safety signal, which is information on a new or known adverse event that is potentially caused by a drug, the lower bound of the 95% confidence interval (CI) of the PRR is required to be ≥ 1 and the number of individual cases to be ≥ 3 . There were 4349 cases of pancreatic cancer (preferred term pancreatic carcinoma) in the 6,665,794 reports recorded in EudraVigilance during the study period. GLP-1 analogues were involved in 611 cases. Exenatide, liraglutide, and dulaglutide met the criteria to generate a safety signal, suggesting that pancreatic cancer is reported relatively more frequently in association with these drugs than with all other medicinal products. The association was strongest for liraglutide (N=313) followed by exenatide (N=222), dulaglutide (N=65), and semaglutide (N=9) with PRR of 42.4 (95% CI, 37.7-47.6), 36.4 (95% CI, 31.8-41.7), 12.6 (9.9-16.2) and 7.1 (3.7-13.7) respectively. Our study findings showed disproportionality for GLP-1 analogues and pancreatic cancer. This study based on EudraVigilance database confirms signal for pancreatic cancer with dulaglutide, exenatide, and liraglutide.

Keywords: Eudravigilance, GLP-1 analogues, Pancreatic Cancer, Pharmacovigilance, Spontaneous reports.

Clinical characteristics of 1000 death cases: A Cross-sectional study of COVID-19 mortality in Tamil Nadu.

K.Meghana¹, B.Premkumar¹, P.Balaji²

¹Department of pharmacology, K.K college of pharmacy, Chennai , India-600128

²Department of pharmacology, Jaya college of pharmacy & paramedical sciences, Chennai ,India

E Mail : meghana12.k@gmail.com

Abstract: This study aims to summarize the clinical characteristics, comorbidities and the principal symptoms of COVID-19 cases, reported in Tamil Nadu. A cross-sectional study was performed from the data updated in the official Tamil Nadu Government Online Portal. The mortality details of 1000 COVID-19 death cases were extracted from March 07 to 26 June. Male preponderance was observed above 30 years of age. The patients with no comorbidities contribute to 21% of deaths, and 80% among them were between the age group of 35-70 years. The next important finding was that, 29% of the death cases were with one comorbid condition, and 50% cases were with 2 or more comorbidities. Diabetes mellitus was found to be the chief comorbidity (38-50%), followed by systemic hypertension (19-43%). The other comorbid diseases were cardiac disease, chronic kidney disease, cancer, CNS complications, liver disorders, hypothyroidism. The important symptoms reported by the symptomatic cases were fever, difficulty in breathing, and cough. The fever was reported by 36%, difficulty in breathing by 33%, and cough in 32% of patients as principal symptoms. The remaining symptoms reported were loss of smell, loss of taste, upper and lower limb weakness, myalgia, loose stools, headache, giddiness and emesis. Most of these symptoms were experienced within a week in most cases. The COVID19-mortality rate in India is ~3%, whereas it is ~1.6% in Tamil Nadu. It concludes that 35-60 years of age are the mobile sources of infection even though, they may be asymptomatic, and having no comorbidities. Persons with comorbidities should take utmost care in prevention of the disease.

Keywords: COVID-19, Mortality, Comorbidity ,Tamilnadu , Cross-sectional study.

Future challenges in Pharmacovigilance

Shubham.G.Suryawanshi, P.N.Folane

Anuradha College of Pharmacy Chikhali, Dist- Buldhana. 443201 (Maharashtra) India

Abstract: Pharmacovigilance is the science of collecting, monitoring, researching, Assessing and evaluating information from healthcare providers and patients on the adverse Effects of medications, biological products, blood products, herbals, vaccines, medical Device, traditional and complementary medicines with a view to identifying new information About hazards associated with products and preventing harm to patients. The ever increasing supply growing knowledge elicitation capabilities of key emerging technologies presents Pharmacovigilance with enormous opportunities and challenges. This provides Briefly about the future challenges of Pharmacovigilance , The sudden increase in purered Cellaplasia and the possible risk of tumour progression associated with the seproducts. The se incidents provide important insight for improving Pharmacovigilance in regulatory decision making. Pharmacovigilance is like as unshade to describe the processes for monitoring and evaluating ADR sand it is a key component of effective drug regulation systems, clinical practice and public health programs. As Pharmacovigilance is the heart of public health programs the more future priorities that Pharmacovigilance have to work like medication errors, by developing new classifications of social data sources and taxonomies for social data for use in pharmacovigilance, as well as the identification of key challenges. Integrated vigilance system also active and proactive survivalance methods for new medications and for some emergency responses regarding diseases. At the same time, the Pv Plistrying to address other challenges like counterfe it drugs, antimicrobial resistance, and surveillance during mass vaccinations and othernational programmes. The se incidents provide important in sight for improving pharmacovigilance, but a lsoposenew challenges for regulatory decision making and also aiming at high quality safety surveillance programmes at both the pharmaceutical research community and clinical levels.

Keywords : Pharmacovigilance, ADR and PvPI

Clinical Research on Cancer and It's Advance Therapy

Ramyani Mukherjee

Department of Pharmaceutical Technology, NSHM Knowledge Campus Kolkata under
Maulana Abul Kalam Azad University of Pharmaceutical Technology, West Bengal -700053
E Mail ; mukherjeeramyani84@gmail.com

Abstract: In the current scenario of this clinical research of Cancer, it's formulated with the advancement of Drug Therapy, Immune Therapy, Gene Therapy and treatment procedure of technical advancement. The objectives behind this Clinical Research of Cancer are used by applying "p53 Gene Therapy" which kill the Cancer Producing Cells and Dominate them to grow by Apoptosis Mechanism. Drug therapy such as advance Cytotoxic Drugs like 'Cisplatin' and some hormone containing drug like 'Fosfestol' use for ovarian cancer. Immune Therapy is processed through 'Methotrexate'. In case of the technical advancement Radiation Therapy, Surgical Therapy is used to treat various types of Cancer. The benefits of these therapies will provide us the use of better treatment quality. Under this Clinical Research p53 mechanism group of drugs give a revolution in Cancer Therapy, destroy the Cancer cells and their growth by Root. There are four phases of Clinical Trials of which "p53 mechanism" drugs are newly invented group of drugs are in Phase II and Phase III. By suppressing Gene and Immune Cells which are producing cancer can be Treated in a new way by this mechanism such as Breast Cancer, Ovarian Cancer, Cervical Cancer etc. The Neuronal and Brain Cancer can be cured by "Stem Cell Therapy". The breast cancer which caused through 'BRCA2 Gene' can be suppressed by 'p53'. Following are the recent advancement of Clinical Research and Development for Cancer Therapy. "X ray therapy" is newly invented technique of Radiation Therapy in Cancer Treatment. Modern Cancer Treatment such as Radiation Therapy gives us 50% curable chance by Clinical Research of Cancer. There are some other Clinical Research which is used to cure 40% chance of Cancer such as Gene Therapy, Immune Therapy and so on.

Keywords: p53 Gene Therapy, Apoptosis Mechanism, Cytotoxic Drug.

Knowledge, Attitude and Practice of Health Care Professionals Towards Deaf Patient Services

Nur Azrida AW^a, Palanisamy S^b, Siti Nur-Hussaini MT^a, Muhammad Fikree A^a, **Mohd Firdaus A^a**, Umi Aqilah A^a

^aDepartment of Pharmacy, University of Malaya Medical Centre, Kuala Lumpur, Malaysia

^bDepartment of Pharmacy Practice, International Medical University, Kuala Lumpur, Malaysia E mail : azrida@ummc.edu.my

Abstract: The care of delivery towards deaf patients is found to be affected by the level of knowledge and exposure of HCP to the Deaf community in a healthcare setting. Current literatures are lacking in the knowledge, attitude and practice (KAP) assessments of healthcare professionals (HCPs) and front-liners other than physicians and nurses who are also involved in deaf patients' hospital experience and care such as pharmacists, dietitians, welfare workers and registration and information counter staff. Hence, a study was aimed to assess the level of KAP of HCPs and staffs toward deaf patients' services and their requirements. A cross sectional, mixed quantitative and qualitative pilot survey was conducted among 30 randomly selected HCPs and staffs who has direct involvement in patient services or contact experience with deaf patients, if any. A total of 46 questions; 8 related to patient demographics, 34 on KAP with true or false and grading responses, and 4 open ended questions, were used in this study. Twenty-two out of 30 were responded to this online survey and the response rate was 73.3. Most of the respondents were female (81.8%), age between 30-39 (59.1%), nurses (40.9%), has a working experience of 6 to 20 years (77.3%), do not have any sign language background (90.9%), provide care for deaf patients (59.1%), encounter at least one deaf patient in the last year (50%) and do not have any deaf relative or friends (95.5%). Around 59% of the respondents not aware of the sign language as the language for the deaf, 45.5% not sure about deaf people have hearing parents, 63.6% look for a qualified sign language interpreter when they have deaf patient. All respondents (n=22) feel deaf patients are unable to convey adequate information to their doctors, and to improve their clinical services they are willing to take up sign language course. This study concludes that the respondents have average to good knowledge on deaf patients and their requirements, however, they have inadequate training and experience to handle deaf patients effectively.

Keywords: Deaf; Sign language; Healthcare; Quantitative; Qualitative; Survey

Impact of Uremic Toxins on the prognosis of End Stage Renal Disease patients.

Haritha.H*, Sam Johnson Udayachander

Department of Pharmacy practice, College of Pharmacy, Sri Ramakrishna Institute of Paramedical sciences, Coimbatore, Tamil Nadu Email: harithavenugopalan97@gmail.com

Abstract: Chronic Kidney disease (CKD) is a major growing public health problem with a global prevalence of 13.4% and patients needing a renal replacement therapy is around 4-7 million. End Stage Renal Disease (ESRD) is the large stage of CKD, where the kidney functions are reduced to 10-15% of its normal functioning. Usually at this stage dialysis and kidney transplantation are the only treatment options available for survival. Despite a better understanding of the disease mechanism and improved control of modifiable risk factors, decline in renal function is still inevitable in major proportion of ESRD patients. In ESRD patients, cardiovascular risk is the main cause of mortality which is not only related to the traditional risk factors like age, hypertension and diabetes mellitus but also to the non-traditional risk factors including inflammation, abnormal bone and mineral metabolism, endothelial dysfunction which are mainly attributed to the retention of uremic toxins in the circulation. The uremic toxins can be characterized into, Low molecular weight solutes (urea, uric acid, thymine, sorbitol etc), Middle molecules (leptin, interleukins, hepcidin, endothelin etc), Protein bound uremic toxins (PUBT) (Indoxyl sulphate, p-Cresyl sulphate, melatonin etc). Protein bound uremic toxins are poorly eliminated in the haemodialysis procedure and hence are of major concern in the uremic toxicity. There exists a reciprocal relationship between the gut- kidney axis. In ESRD, gut dysbiosis takes place and proteolytic bacterial fermentation of the gut microbiota produces two key nephrovascular toxins- Indoxyl sulphate and p-Cresyl sulphate, increased levels of which accumulate in ESRD patients both due to increased intestinal production and decreased glomerular filtration and proximal tubular secretion. This leads to the progression of ESRD by the release of pro-inflammatory cytokines and renal tubule-interstitial fibrosis. There is also increase in the overall cardiovascular mortality due to smooth muscle proliferation and vascular calcification and a series of metabolic syndromes like hyperglycemia and hypercholesterolemia. There is also an increased evidence of cerebrovascular and cognitive disorders attributed to the accumulation of the uremic toxins in ESRD patients. Analysis of uremic toxins therefore makes a potential therapeutic target in patients with chronic kidney disease.

Keywords: End stage renal disease, uremic toxins, Indoxyl sulphate

Analysis Of Adverse Drug Reactions In Pediatric Patients Reported At ADR Monitoring Center

Rajalakshmi Rukmangathen¹, Vasundara Devi Brahmanapalli²

¹Patient Safety Pharmacovigilance Associate, ADR Monitoring Centre (AMC), Sri Venkateswara Medical College, Tirupati-517507, Andhra Pradesh, India. Email: rrajalakshmi2002@yahoo.co.in

²Co-ordinator, AMC, Professor & Head of Pharmacology, Sri Venkateswara Medical College, Tirupati-517501, Andhra Pradesh, India.

Abstract: To assess, categorize and analyse the adverse drug reactions among the paediatric patients in a tertiary care hospital. All adverse drug reactions of paediatric patients reported at the Adverse Drug Reaction Monitoring Center, Sri Venkateswara Medical College, Tirupati, under Pharmacovigilance programme of India, during January 2019 to April 2020 were identified and evaluated. A retrospective analysis was carried out for ADR pattern, drug groups, demographic profile, causality (as per the WHO-UMC scale), severity (Hartwig and Seigel scale), and preventability (Schumock and Thornton criteria) of a said drug. A total of 72 ADRs were documented among pediatric patients. Most of the ADRs occurred in male paediatrics (61%) and (40.2 %) occurred in the age group of 1 month to 2 years. Antibiotics comprised the major group of drugs causing ADRs (48.5%). Skin related adverse drug reactions (rashes and urticaria) were the most common type of ADR (32%) followed by vomiting, loose stools, constipation and fever. As per causality assessment scale, majority of adverse drug reactions were found to be probable (73.6%). There were 65% of reactions being moderate and 33% were mild reactions as per severity scale, however, probably preventable (62%). The adverse drug reactions under serious criteria of the reaction required hospitalisation/prolonged hospitalization was 51.8%. Adverse drug reactions occurred more in male paediatrics and antibiotics were more commonly implicated. Most of the reactions were of moderate severity and probably preventable. This indicates that there is a necessity for a rigid monitoring of ADRs among pediatric patients to ensure safety of drug therapy.

Keywords: Adverse drug reactions, Pediatrics, causality assessment, antibiotics, Pharmacovigilance.

Knowledge, Attitude and Practice Of General Public Of Muscat Region Towards The Chronic Disease Hypertension

Dhanalekshmi UM, Jawaher Abdullah Sultan Al Abri

College of Pharmacy, National University of Science and Technology, Muscat, sultanate of Oman

Abstract: Hypertension is a serious medical condition and can increase the risk of heart, brain, kidney and other diseases. It is a major cause of premature death world. Assessment of knowledge, attitude and practice (KAP) is a crucial element of most of the chronic diseases especially hypertension and diabetes among general public. The main purpose of this study is to assess the level of knowledge of general public about the chronic disease hypertension and to assess their attitudes and practices towards this disease. KAP were assessed from an administered structured questionnaire. The relation between awareness and practice among sex, age, educational level and employment status have been analyzed using statistical data. Most of the participants (70%) were female. 50% of study participants recognized that hypertension is dangerous to their health and 56% agreed about the importance of maintaining stable blood pressure. Participants in the age group of 19-30 years have more knowledge about the disease. 72% of participants are accepting the significance to include green leafy vegetables, fresh fruits in their daily diet and about the amount of salt consumption. 44% of participants are practicing the regular checkup, taking regular medicine and follow-up in most of the diseases. Educational level also plays a major role in KAP. It has been concluded that most of the participants in Muscat have knowledge that the diet control, habits, emotional stress and exercise acts as central pillar for the management of hypertension.

Keywords : KAP, Chronic Disease Hypertension.

A Study On The Paramountcy Of Ceaseless Education, Awareness And Training Of Pharmacovigilance In India

Gauthem K Pillai, Dhanya Dharman, Shaiju.S.Dharan

Ezhuthachan College Of Pharmaceutical Sciences, Trivandrum, Kerala
E mail:gauthemkpillai@gmail.com

Abstract: The World Health Organisation defines Pharmacovigilance (PV) as the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug related problems. This branch of pharmaceutical sciences plays a pivotal role in today's healthcare practice in order to achieve its goals on better patient care experience. For making this possible, it is important to have an incessant education, awareness and training in Pharmacovigilance. In Indian scenario, this mainly depends more on four types of relevant factors such as the pharmaceutical industry, Healthcare professionals, Healthcare science students, Patients and consumers. The Pharmaceutical Industry, which act as the main stakeholder, drives the clinical research and pharmaceutical market is by default one of the main factors that could incorporate training and awareness of pharmacovigilance. It is essential for the health professionals to get continuous training and awareness on P V during their clinical practice and professional life. Pharmacy education as well as the health science academic program should include mandatory papers on pharmacovigilance. Last, but not least, patient's engagement concerning the pharmacovigilance is an area which -needs an innovation. To conclude, P V should be considered as an inevitable part of coherent Clinical and Healthcare practice; important milestones can only be achieved incessant training and education among healthcare professionals, Students, patients and consumers since P V is a critical factor for the safety and efficacy of medicines, there is a constant need of improving training, education and awareness to optimize the benefits of patient care.

Keywords : Drug safety, Pharmacovigilance , Patient care, Education, Training

Pharmacovigilance and Its Importance-A Review

Sarath Kumar S.J., Shaiju S Dharan, Merlin N J

Ezhuthachan College of Pharmaceutical Sciences, Marayamuttom, Neyyattinkara P.O, Thiruvananthapuram, Kerala, India. E mail :sarathkumarsj123@gmail.com

Abstract: Pharmacovigilance is the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other medicine-related problem. Pharmacovigilance (PV), also known as drug safety. PV is an important and integral part of clinical research. Drugs are used for the diagnosis, mitigation, treatment, prevention and cure of disease in man or animal. An adverse drug reactions (ADRs) are the unintended and noxious responses to a health product which causes at the doses usually used or tested for the diagnosis, prevention or treatment of a disease. Adverse Drug Reactions (ADRs) are encountered commonly in the daily practice. In addition to the morbidity and the mortality caused by them, they also create an economic burden on the health care system. These adverse drug reactions are preventable if our healthcare professional pays close attention to the details of the adverse effects, following a drug administration. The awareness about ADRs can decrease the irrational practice of drugs. So It is necessary to create an awareness among the prescribers and health care professionals about the ADR monitoring. Pharmacovigilance is very important because it help to improve the patient's safety and enhance his care in terms of the use of medicines, including paramedical interventions. It also supports public health programs by providing reliable information for the efficient assessment of the risk-benefit profile of medicine.

Keywords : Pharmacovigilance, ADR, risk-benefit.

Yogic Management of Covid Fear and Stress Among Elderly

Akila Shanmuga Sundaram^a, Palanisamy Sivanandy^b

^a Department of Physical Education, Bharathiar University, Coimbatore, Tamil Nadu, India.

^b Department of Pharmacy Practice, School of Pharmacy, International Medical University, Kuala Lumpur, Malaysia

Abstract: The whole world is shook by the pandemic COVID19. It has set the world stunned by fear. The dependent population above 60 years and below 15 years is highly vulnerable. Home quarantined situation has impacted the psychological wellbeing of the elderly across the world. The objective of the present investigation was to examine the effect of Yoga in managing COVID fear and stress among the elderly. To achieve the purpose of the study 30 elderly women who volunteered for the study were selected as subjects. The age of the subjects ranges between 60-65 years. The pre-test was conducted on the selected psychological variables such as fear and stress. They were randomly assigned into two groups equally so that each group has 15 subjects. The experimental group was named as COVID Yoga Group (YG). The second group was control group (CG). After completion of the pre-test the subjects of the experimental group were treated with COVID specific Yoga program which includes first two days of Yogic counseling on Yama Niyama Values and its need of the hour, from third day pranayama and meditation training programs for 21 days were given. After 21 days suryanamaskar was included for next 21 days with last day orientation for incorporating this as a regular practice which will facilitate yoga as a lifestyle habit. At the end of the training period post-test was conducted on the dependent variables for all the groups. To analyze the treatment effect of pre and post-test training 't' ratio was used. The experimental group (YG) has shown significant improvement than the control group in the selected variables. The control group did not show any significant improvement on any of the selected variables. Based on the results it was concluded that the implication of Yogic training might have been the source of its dominance on the managing COVID fear and stress of elderly which is the need of the hour.

Key words: COVID fear, Stress, Yoga, Pranayama, Suryanamaskar, Meditation.

Pharmacovigilance The Need Of The Hour: Way toward a safe medical practice

Jyoti Sadashiv Dudhane, Poournima Sachin Sankpal.

Vasantidevi Patil Institute of Pharmacy, Kodoli, Kolhapur, Maharashtra India.

Email: jyotidudhane6776@gmail.com

Abstract: Pharmacovigilance (PV) is the pharmacological science relating to the detection, assessment, understanding and prevention of adverse effects, particularly long term and short term side effect of medicines. All medicines (pharmaceutical and vaccines) have side effect some are known many are still unknown even this medicine has been in clinical use. The important to monitor both known and unknown side effects of medicines in order to determine any new information in relation to their safety profile. Pharmacovigilance looks at all available information to assess the safety profile of a drug. Pharmacovigilance should also take the benefit of the drug in account. Spontaneous reporting depends on the health professional. As a such pharmacovigilance heavily focuses on adverse drug reactions, ADRs, which are defined as any response to a drug which is noxious and unintended, including lack of efficacy (the condition that this definition only applies with the doses normally used for the Prophylaxis, Diagnosis or therapy of disease, or for the modification of physiological disorder function was excluded with latest amendment of the application legislation). Medication error such as overdose, and misuse and abuse of a drug as well as drug exposure during pregnancy and breast feeding, are also of interest, even without an adverse event, because they may result in an adverse drug reaction. Information received from patient and healthcare providers via pharmacovigilance agreements (PVAs), as well as other sources. Such as the Medical literature, plays a critical role in providing the data necessary for pharmacovigilance to take place. In fact, in order to market or to test a pharmaceutical order to market or to test a pharmaceutical product in most countries, adverse event data received by license holder (usually a pharmaceutical company) must be submitted to the local drug regulatory authority.

Keywords : Pharmacovigilance, ADR.

Insilico Docking Studies of a Series of Indolo[2,3-c] quinolines as PDE5 Inhibitors.**Padma Bhavani** and Vindhyaasree

Department of Chemistry, RBVRR Women's College of Pharmacy, OU, Hyderabad, Telangana, India E mail : padmabhavani.borra@gmail.com

Abstract: cAMP and cGMP are secondary messengers which play a major role in mediating various biological responses like smooth muscle contraction, vasodilation etc. The cyclic nucleotide phosphodiesterase (PDEs) are a group of enzymes that degrade the phosphodiester bonds in secondary messengers-cAMP and cGMP. They catalyse the hydrolysis of cAMP and cGMP. The hydrolysis products of cAMP and cGMP participate in phosphorylation of various transcription factors related to smooth muscle contraction resulting in alteration of signalling pathway and activity. Hence, inhibition of PDEs increases the concentration of cellular cAMP and cGMP. Among a group of phosphodiesterase inhibitors, PDE5 enzyme is selective for cGMP. Tadalafil (Cialis) is an FDA approved beta-carboline containing PDE5 inhibitor to treat male erectile dysfunction. In this work, we performed docking studies for beta-carboline analogues, which are indolo[2,3-c] quinolines reported for their potent anti-cancer activity via decreased phosphorylation of NF- κ B on serine 536 residue priorly, as PDE5 inhibitors. All the compounds are screened for their binding affinity against the crystal structure of Human PDE 5A (PDB Id: 1XOZ) using virtual screening software PyRx and the compounds having most affinity with the protein are analyzed for the parameters like free energy, presence and number of hydrogen bonding between ligand and receptor, hydrophilic, hydrophobic, and pi-pi interactions using Autodock. The ligand and receptor are optimised by adding protons and performed energy minimization process. The docking site was decided based on the reference articles available in literature for active binding sites of PDE5 enzyme. The docking results were then visualised using pyMOL software. Here in our compound 11, the methylene dioxy phenyl group is replaced by naphthalene group. It showed good binding affinity with a binding score of -5.8 and hydrophobic interaction via L804. Furthermore, we want to study the PDE5 inhibiting nature of indolino quinolines using QSAR and molecular docking studies.

Keywords: Phosphodiesterase, indolino quinolines, autodock, tadalafil, beta carboline

Structure Based Drug Design, Synthesis and Evaluation of Noval CLK1A Inhibitors as Anti-Alzheimer's Agents

Ravindra mishra^{1*}, Anoop singh^{2*}

¹Department of pharmacy, Bhagwant university ajmer rajasthan india-305001

²Department of pharmacy, Sanjeevan College of pharmacy ,Dausa Rajasthan india-303303
E mail- ravindramishra1988@gmail.com

Abstract: A sharp increase in the incident of Alzheimer's disease (AD) especially in developed and developing countries is a matter of serious concern. It is predicted that 26 million people are affected by Alzheimer's disease worldwide and it will be triple by the year 2050. There are two groups of drugs available on the market, which are classified according to their mechanism of action. Inhibitors of acetyl cholinesterase and NMDA receptor inhibitors have beneficial effects on cognitive, functional, and behavioral symptoms of the disease, but their role in AD pathogenesis is unknown. Current treatments for AD provide only modest symptomatic relief. There is an urgent need for 'disease modifying' agents that slow the course of the disease and prevent or delay the disease in susceptible individuals. The availability of multiple crystal structures of DYRK1A and CLK1 complexed with inhibitors provides an opportunity for utilizing the structure based high-throughput virtual screening strategy for identifying potent and pharmacologically favorable inhibitors of DYRK1A and CLK1. With this understanding, the present research will employ a docking-based virtual screening technique to screen a commercially available chemical database against DYRK1A and CLK1 for identification of potent and diverse lead molecules with DYRK1A and CLK1 inhibitory activity. The identified lead molecules will be further optimized through SAR approach to give optimal candidates for translation into the clinic.

Key word - CLK (casein like kinase), Down syndrome, potential inhibitors, DYRK1A (Dual specificity tyrosine-phosphorylation-regulated kinase 1A)

Validation of hypoglycaemic activity of *Syzygium cumini* based on scientific literature review

Sneha Antony*, Jettilda C J, Jeema Jeemon, Aravind R

St. James College of Pharmaceutical Sciences, St. James Medical Academy, Chalakudy, Kerala, India. E mail : snehaantonyramarath@gmail.com

Abstract: Diabetes mellitus is a chronic metabolic disorder that affect carbohydrate, lipid & protein metabolism characterised by increased blood glucose level. Diabetes is currently the World's largest endocrine disorder. *Syzygium cumini* or Jamun is mentioned in the management of diabetes in various traditional system such as Ayurveda, Unani, Siddha, Sri Lankan, Tibetan and folk systems of medicine. In this study, the hypoglycaemic activity of *Syzygium cumini* is validated, based on scientific literature review was conducted. About 30 full text of invitro, in vivo and clinical studies from various plant parts of Jamun were reviewed based on phytochemical aspects and pharmacological screening method. The major chemical constituents present are jambosine, gallic acid, ellagic acid, corilagin, friedelin, kaempferol anthocyanins, petunidin etc. the review conclusively underlined the antidiabetic activity of *Syzygium cumini* especially the seed and its chemical constituents. *Syzygium cumini* is effective in decreasing fasting blood glucose level, glycosylated Hb and reduces the blood cholesterol level. The mechanism of action revealed that it promotes glycogenesis, act as insulin secretagogue, promote GLUT-4 transport, inhibit enzymes like α -amylase and α glucosidase. The invitro study also demonstrated the significance of PPAR- γ and PI3 kinase up-regulation by S. cumini in augmenting the glucose transport. The seeds of the plant also found to have insulin mimetic activity and also promote glycogenesis. It is also helping to reduce the vascular complication of diabetes.

Key words: Syzygium Cumini, Jamun seeds, Antidiabetic plant, Hypoglycaemia

Nano Suspension Preparation by DOE Optimized Solvent Diffusion Method

Ashwini Joshi¹, Abhinit Mulay², Bhagavan Raju¹

¹Sri Venkateshwara College of Pharmacy, Madhapur, Hyderabad-500081.

²Chemo India Formulations Pvt. Ltd., Hyderabad-500078 E mail : pharma.ashu3@gmail.com

Abstract: Colloidal dispersions of nanosized drug particles stabilized by surfactants are called nano-suspensions. They are biphasic system consisting of pure drug particles dispersed in an aqueous vehicle in which the diameter of the suspended particle is less than 1 μm in size. Nano-suspensions can be used to enhance the solubility of drugs that are poorly soluble in both aqueous and lipid media. As a result, the rate of flooding of the active compound increases and the maximum plasma level is reached more quickly. The use of DoE for optimizing the nano-suspension formulating process is a preferred approach that provides a precise, accurate and robust process leading to optimized use of APIs and excipients. Optimizing the formulation process requires proper selection of the experiment design and good statistical analysis with appropriate data to produce a useful, validated predictive model that will produce the desired results with less failure. Factorial designs, where all the factors are studied in all possible combinations, are considered to be the most efficient in estimating the influence of individual variables and their interactions using minimum experiments. This research focuses on the development and statistical optimization of formulation process of, Analgesic drug Tramadol Hydrochloride. Nano-suspension was fabricated by solvent diffusion technique by obtaining optimized parameters using full 23 factorial design with concentration of lipid, surfactant and co-surfactant as independent variables while particle size and entrapment efficiency (EE) as dependent variables.

Keywords: Nano-suspension, factorial design, optimization, solvent diffusion and Tramadol Hydrochloride.

A Core Scaffold Pyrazolone Fused Heterocyclic Analogues as Potent Anticancer Agent

A.Sumathy^a, R.Suresh^b, N.L.Gowrishankar^a

^aDepartment of Pharmaceutical Chemistry, Prime College of Pharmacy, Palakkad.

^bDepartment of Pharmacy, Faculty of Engineering and Technology, Annamalai University, Chidambaram, Tamilnadu, India. E mail: sumathy512@gmail.com

Abstract: A study was aimed to synthesize pyrazolone fused heterocyclic derivatives for its anticancer activity. The present study focuses the chemistry of pyrazolone derivatives, their potential biological activities and *in-silico* screening of designed compounds. Maestro 11 created with 2017-2 advanced version for comparative analysis of pyrazolone fused heterocyclic derivatives. Patchdock, Igemdock, Glide were also used for comparative analysis of pyrazolone fused heterocyclic derivatives thiazolidinone, azetidinone oxadiazoles, and few methyl derivatives of thiazolidinone. The synthesized compounds were screened for anticancer activities on human breast cancer cell lines model. An attempt was made by targeting the epidermal growth factor receptor (EGFR-TK, EGFR-PI3K) to identify modulators of breast cancer that could serve as potential biomarkers of aggressive disease. In-depth proteomic analysis of the conditioned media of three breast cancer cell lines (MDA-MB-231, Hs578T, MCF-7) were also performed. High anticancer properties of these synthesized pyrazolone derivatives were observed which will benefit the breast cancer survivor. This may encourage the medicinal chemists to synthesize many novel chemotherapeutic agents. Numerous methods for the synthesis of pyrazolone fused derivatives and their various structure reactions offer enormous scope in the field of medicinal chemistry.

Keywords: Pyrazolone; Heterocyclic; Breast cancer; Cell line; Growth factor; Chemotherapy.

Development of Metallic Nanoparticles to Eradicate Bacterial Biofilm for Effective Treatment of Bacterial Keratitis

Nagendra Bhuwane, Preeti K Suresh

University Institute of Pharmacy Pt. Ravishankar Shukla University Raipur C.G. India
492010 Email: nagendraassameer@gmail.com

Abstract: Bacterial keratitis is an infection and inflammation of the cornea that induces pain, decrease vision, light sensitivity and tearing or release from the eye that can, in severe cases cause loss of vision. Bacterial keratitis develops rapidly and corneal annihilation may be complete in 24 - 48 hours with some of the extra infective bacteria. The formation of microbial biofilms is an important reason for failure of antimicrobial therapy. Biofilm-associated infections represent one of the major threats of modern medicine. The present work will focus on describing the effective biofilm control and removal of biofilms. It is estimated that about 65% of all bacterial infections are associated with bacterial biofilms. The advantages of nanotechnology are mainly due to the unique characteristics of the materials at the nanoscale, which usually differ from the macrolevel characteristics of the materials. Ranging from the combination of materials or devices with drugs and biomolecules, adding benefits like slow and controlled drug release, promoting greater efficiency of tissue penetration to greater protection against drug degradation, nanotechnology can be used to prevent, monitor, control, and cure diseases in several ways. At present, the main types of nanosystems used for the delivery of bioactive substances are liposomes (LIPs), microemulsions (MEs), nanoemulsions, cyclodextrins (CDs), solid lipid nanoparticles (SLNs), polymeric nanoparticles (PNs), and metallic nanoparticles (MNPs). The nanostructured systems have become promising tools for the treatment of infectious diseases, which are resistant to conventional treatments or persistent, improving the quality and expectancy of life of patients who suffer from such diseases. Advances in the development of antibiofilm technologies involving the use of nanoparticles have emerged in recent years the metal nanoparticles are attracting much interest because of their potent and wide spectrum antibacterial activity. Bacterial strains that are resistant to current antibiotics have become serious public health problems that increase the need to develop new bactericidal materials. Therefore, nanoparticles have gained importance in the field of biomedicine.

Key Words: Bacterial Keratitis, Nanotechnology, Bacterial biofilm, Metallic Nanoparticles.

Formulation and Evaluation of Bilayer Tablets bearing Floating PMMA Microspheres of Baclofen and Rabeprazole sodium

Asha S, Tony M Kuriakose and Dr. Arun Raj R

Department of Pharmaceutical Sciences, RIMSR, Centre for Professional and Advanced Studies, Rubber Board P.O. Kottayam, Kerala, India - 686009
E mail : asharekichuz472@gmail.com

Abstract: The present study aims at formulation, optimization and characterization of floating Poly Methyl Methacrylate (PMMA) microspheres of Baclofen and Rabeprazole sodium and to formulate into a bilayer tablet for the management of Multiple sclerosis and Persistent hiccups. Multiple sclerosis is a Central Nervous System (CNS) demyelinating disease. The hiccups of long term nature (longer than 48 hours) are termed as Persistent hiccups. It's mainly caused due to the irritation or damage of vagus or phrenic nerve. Here, both the drugs are having short biological half-life which limits their therapeutic potential. Gastro Retentive Floating Drug Delivery System is used for increasing gastric residence time of the drugs. Due to its high biocompatibility, PMMA is the widely used polymer. Baclofen and Rabeprazole sodium microspheres were prepared separately by o/w solvent evaporation method. The prepared microspheres of Baclofen and Rabeprazole sodium were characterized for its percentage entrapment efficiency, percentage buoyancy, percentage in-vitro drug release profile, Scanning electron microscopy study and Differential scanning calorimetry. Nine formulations each of Baclofen (FB1-FB9) and Rabeprazole sodium (FR1-FR9) floating microspheres were prepared according to the Response surface 3 level factorial design by Design expert 11 trial version. Based on the statistical evaluations, the software suggested one optimum batch each for Baclofen and Rabeprazole sodium floating PMMA microspheres. The optimized microspheres of Baclofen and Rabeprazole sodium were evaluated and formulated into bilayer tablet by direct compression. Sustained release layer of Baclofen showed an in-vitro drug release of 77.4% and that of Rabeprazole sodium exhibited an in-vitro drug release of 79.7% in 0.1N HCl at the end of 8th hour in-vitro dissolution study. In-vivo floating study of the formulated bilayer tablet was performed in New Zealand rabbit for 6 hours and was well retained in the stomach.

Keywords: Baclofen & Rabeprazole sodium, Floating PMMA microspheres, Bilayer tablet, Multiple sclerosis and Persistent hiccups.

Formulation and Evaluation of Imatinib Nanosuspension

Jithin Raj, Rinku Jayaprakash, Smitha K Nair

Department of Pharmaceutics, St. James College Of Pharmaceutical Sciences Chalakudy, Thrissur, Kerala, India. Email.id: jithinrajklpm@gmail.com

Abstract: Imatinib is an oral medication used for treating chronic myeloid leukemia and acute lymphoblastic leukemia. It belongs to kinase inhibitor and prevent tumours from growing by reducing the action of proteins that control cell division, growth and survival. The objective of the study is to enhance the bioavailability of imatinib by preparing it as nanoformulation by improving solubility. But numbers of drug discovery programs most of them are poorly soluble. Methodology includes formulation of nanosuspension by nanoprecipitation technique. It has therapeutic advantages, such as simple method of preparation, less requirement of excipients and increased saturation solubility. The characterization of NS imatinib such as SEM analysis, zeta potential analysis and FTIR analysis. The zeta potential values of formulated nanosuspension were obtained as (2.78mV) using homogenization method. Invitro anti-oxidant study and invitro anticancer studies of Imatinib nanosupension by DPPH method. Solubility study indicated that imatinib nanosupension enhances the solubility of the imatinib produced by the homogenization method. Stability study showed that at low temperature and at room temperature the stability of nanosuspension can be maintained for six month. In conclusion, nano suspension formulation to improve poorly soluble for treatment of cancer diseases.

Keywords: Imatinib, nanosuspension, anticancer, solubility and bioavailability.

A Review on Repurposing of Remdesivir In Covid-19

Nikhil Cherian Sam, Abarna Lakshmi R, Shailaja K

Department of Pharmacy practice, C.L. Baid Metha College of Pharmacy, Chennai-97.

Abstract: An outbreak of 2019-nCoV infection has spread across the world. No specific antivirals have been approved for the treatment of COVID-19. Repurposing the drug is the only choice in this pandemic situation. So herein, we summarized through a review of articles of Remdesivir in SARS-CoV-2 infection. The literature review was prominently used from accredited research databases like a library, google scholar, PubMed, Elsevier, and other peer-reviewed scientific articles. Search terms included remdesivir in coronavirus, 2019. Remdesivir approved for emergency use in patients with Severe COVID-19 whose oxygen saturation found to be <90% and in mechanical ventilation. It is found to decrease the viral load and improvement in oxygen status and shortens the recovery time. It is found to be more effective than other antivirals which are used in SARS-CoV-2 infection. Adverse effects are reversible and acceptable such elevation in LFT, serum creatinine, and infusion-related reactions. Pharmacodynamic drug interactions were found with chloroquine and hydroxychloroquine. Still more data needed to justify its safety. Remdesivir showed the most promising results in COVID-19. Needs more clinical evidence and trials to strengthen its use in this pandemic situation. However, the jury is still out while awaiting the results from the forthcoming trials.

Key words: Remdesivir, COVID-19, Repurposing.

Insilico molecular docking study of RNA dependent RNA polymerase inhibitor against COVID-19

Kaviarasu J, kishore kumar I, Suresh kumar C A

Department of pharmaceutical chemistry , Aadhubhagwan collage of pharmacy, Randhan, T.V Malai dt. Tamilnadu, India. E mail :kavinmichael98@gmail.com

Abstract: COVID-19 may be a devastating global pandemic round the world. While the bulk of infected cases appear mild, in some cases, individuals present respiratory complications with possible severe lungs damage. This virus can infect both animals, and other people and its control are complicated because there's no effective vaccine or drugs available in markets for the treatments for COVID-19 so far. During this study, we docked some synthetic drugs (Referance : Remdesivir, favipiravir) acyclovir, ribavirin, penciclovir against the target protein RNA dependent RNA polymers PDB ID 6M71. The compounds showed almost equal binding energy towards the reference ligand. Our analyses revealed that the highest hits might function potential anti- SARS-CoV-2 lead molecules for further innovation and drug development process to combat COVID-19.

Keywords: Molecular docking, RNA polymers, Remdesivir, Favipiravir, Acyclovir.

Teratogenicity evaluation of selected drugs on zebra fish experimental system

Pillewan S.R., Singh D., Nikam V

STES's Smt. Kashibai Navale College of Pharmacy, Kondhwa, Pune-411048, Maharashtra, India E mail: pillewansmita25us@gmail.com

Abstract: To establish zebra fish model for teratogenicity study and screen selected drugs for teratogenic activity. Zebra fish share significant similarity with human and are being utilized as an in vivo model for different human diseased conditions. High fertility, low upkeep cost, transparent embryos, quick advancement and convenient drug delivery are the benefits over regular vertebrate models. The viability and fertility count was done to assess the mortality wave in our facility during early stages of larvae development. Compounds screening done, 4 hours post fertilization (hpf). Embryos were treated with compounds and assessed for visual morphology and movement. At 120 hpf larvae morphology was assessed for (tail, body axis, pigmentation, development, liver morphology (LM) and eye morphology (EM)). The assessment results were scored according to the extent of abnormality in the assessed parameters. The drugs used for screening were Tetracycline, Ramipril, Amidarone, synthetic compounds CHR, MAN and PYR. We have investigated the zebrafish model using known human teratogens and non-teratogens. Further three in house synthesized anticancer compounds were evaluated at different concentrations depending upon their pharmacokinetic profile and mechanism of action. Among all compounds, tetracycline, an antibiotic which acts by preventing the binding of aminoacyl t-RNA with bacterial ribosome and thus halts a protein synthesis, showed developmental arrest at 1000 μ M concentration. High degree of structural abnormality such as tail bending, excessive flexibility suggesting abnormal skeletal was observed. The three in-house synthesized compounds found to be safe without any severe abnormalities in zebrafish model. Teratogenicity studies in laboratory animals and humans were compared with the results obtained. The result supports the application of zebrafish experimental system as an alternative method for teratogenic studies.

Key words: Teratogen, zebrafish, embryo, fertility, screening

***In Vitro* Anti-Oxidant Activity of *Cassia glauca* leaves Extract**

Poornima CH, Y.Srinivas

Department of Pharmacognosy, BVVS Hanagal Shri Kumareshwar College of Pharmacy,
Bagalkot, Karnataka, India

Abstract: *Cassia glauca* is a medicinal plant used for management of different human diseases, the antioxidant potential of the leaves from this herb was investigated using its ether, chloroform and methanol extracts. All the extracts were rich in phenols, glycosides, alkaloids and flavonoids. The potential antioxidant activity of extracts of *Cassia glauca* was carried by DPPH radical scavenging activity, lipid peroxidation inhibition activity and hydroxyl radical scavenging activity. The methanol extract of *Cassia glauca* was found to be more active with low IC₅₀ value [54.02 µl/ml] in DPPH radical scavenging activity, while the chloroform extract of *Cassia glauca* was shown more potent lipid peroxidation inhibition activity and hydroxyl radical scavenging activity with lower IC₅₀ value 100 µl/ml and 94.33 µl/ml respectively. This study reveals that *Cassia glauca* can be an interesting source of antioxidants with their potential use in different fields.

Key Words : *Cassia glauca*, *In-vitro* anti-oxidants, DPPH, LPI, HRA.

Morphological effect and osmotic fragility of Red blood cell: action of a methanolic extract of *lantana camara*

Mayuri Patole, Vipul Patil, Shitalkumar Patil

Department of Pharmaceutical Quality Assurance, Ashokrao Mane College of Pharmacy,
Peth Vadgaon, Dist.- Kolhapur, Maharashtra, Pin-416112, India.

E mail : mayuripatole0@gmail.com

Abstract: The *lantana camara* plant has been used in various communities for treatment against various disease such as diuretic, gastrointestinal diseases, expectorant. Morphological effect and osmotic fragility assay have been used to interaction between drug and plasma membrane of red blood cell. The aim of these study was to investigate the effects of a methanol extract of the *lantana camara* on the morphological evaluation and osmotic fragility assay of red blood cell using in vitro studies. The blood samples were treated with extract of *Lantana camara* (10mg/mL), it resulting the assay of osmotic fragility and morphological analysis. In the presence of the extract, the data obtained indicated a significant ($p < 0.05$) increase of haemolysis and modifications on the morphology of RBC. These effects of the *Lantana camara* may be associated with some pharmacological properties of the chemical compounds of this studied extract.

Keywords: *Lantana Camara* Linn., Methanol, osmotic fragility assay, morphological effect, Red blood cell