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SELECTED ABSTRACTS FOR ORAL PRESENTATIONS

Abstract no:1

An Epidemiological Study on The Prevalence of Self-Medication Practices: A Serious Threat for The Population in The Muvattupuzha Region in Kerala, India

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INTRODUCTION- WHO defines self-medication as, 'the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms. It's the method opted by many for minor illnesses worldwide. It can be the use of non-prescribed drugs, herbal products, reusing older prescription without consulting the doctor. It is a serious concern with many antibiotics.
OBJECTIVE- A study was conducted in Muvattupuzha region, Kerala state, to estimate the impact of self-medication in various age groups.
METHODOLOGY: A prospective, cross- sectional, questionnaire-based study was carried out among 400 people selected by random sampling from Jan 2017- Oct 2017. Most common disease were fever, headache and cold for which self-directed medicines were used. The major reasons were that the disease was minor, convenience, lack of time etc. Most people also have concomitant disease for which they take medicines on a regular basis, leading to risks of potential drug interactions with self- medication.
RESULT: There was no statistically significant difference in self-medication pattern between different age groups (0.874) but there was significant difference between males and females among which females showed more practise of self-medication(p=0.00). Among the subjects selected only 17.33% had the practice of self-medication with antibiotics and 44.23% were unaware about antibiotics.

Abstract no:2

Evaluating the Alteration in Renal Function in ADHF Patients

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BACKGROUND AND OBJECTIVE: Acute kidney injury (AKI), Alteration in the renal function which occurs during admission for Acute Decompensated Heart Failure (ADHF) has a major impact on prognosis and management. There are many guidelines available to determine the alteration in renal function but to choose the appropriate guidelines for the alteration renal function in ADHF patients is the main objective. To monitor the incidence of renal dysfunction in ADHF patients is the secondary objective.

METHODOLOGY: An Observational study which was carried over a period of 6 months in 135 patients. Evaluation of renal function is done using various guidelines like RIFLE (Risk, Injury, Failure, Loss of Kidney Function, and End-stage Kidney Disease), WRF criteria, novel KDIGO (Kidney Disease: Improving Global Outcomes) and Acute Kidney Injury Network (AKIN) criteria

RESULTS: Out of 135 patients 34 patients were classified according to AKIN criteria where 14 patients were found to be AKI, the incidence was found to be (41.17%) and 20 patients as NON-AKI (58.82%). 101patients were grouped according to WRF criteria, where in 41 patients had WRF (Worsening Renal Function) and 60 patients had No WRF and their incidence was found to be 40.59% and 59.40%respectively.

CONCLUSION: AKIN criteria and WRF criteria was found to be more relevant criteria in assessing the alteration in renal function in ADHF patients.

Abstract no:3

Ciprofloxacin Induced Cutaneous Vasculitis: A Cross Sensitivity to Norfloxacin

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A 30-year-old male patient was admitted to the Dermatology Department of Sagar Hospitals with chief complaints of lesions over the hands, lips and at the back of the patient's body and also mild pedal edema for past 2 days after the patient had administered Tab paracetamol & Tab Ciprofloxacin for the treatment of febrile illness and generalized weakness. Patient had a history of the same reaction, twice for Tab Norfloxacin but never experienced this Adverse Drug Reaction (ADR) to ciprofloxacin before using Norfloxacin. Upon general examination, the patient was treated with Tab Hydralazine, Tab Prednisolone and Calamine lotion after the withdrawal of drug Ciprofloxacin. Dechallenge of Ciprofloxacin showed that there is improvement in his symptoms indicating drug induced toxicity. The causality assessment was done using the Naranjo's adverse drug reaction probability scale and the score was 9 indicating highly probable relationship between the ADR and drug & moderate in severity according to Hart wig severity assessment scale. From the Dechallenging and Rechallenge information the patient was concluded to be sensitive to Ciprofloxacin and Norfloxacin. In conclusion patient may need to avoid the class of fluoroquinolones since a cross sensitive reaction was observed to Norfloxacin. Physicians and other healthcare professionals should maintain a high index of suspicion to closely monitor the cases of cutaneous vasculitis due to Ciprofloxacin and Norfloxacin as these drugs are commonly prescribed and well tolerated. Furthermore, this ADR can be prevented in future, only by providing the awareness, counseling and also by providing an ADR alert card to the patient.

Keywords: Ciprofloxacin, Norfloxacin, Cross Sensitivity, Vasculitis

Abstract no:4

A Prospective Observational Study on Drug Related Problems Among Geriatric Patients Admitted in The Department of General Medicine

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BACKGROUND: Geriatrics patients experience age-related pharmacokinetic and pharmacodynamic changes and associated co-morbidities, which increased prevalence of Drug Related Problems (DRPs) among the geriatric population.
AIM AND OBJECTIVE: To evaluate the DRPs among the geriatric patients during the patient hospital stay.
METHODS: In the current study, 200 consecutive patients of 60 years or older and admitted with acute illness in the Department of General Medicine were prospectively studied for a duration of six months. Medication chart of patient was observed and recorded in the data collection form. DRP's were identified by evaluating the prescriptions in terms of indication, dosage, duration of therapy, adverse drug reactions (ADRs) and appropriateness of drug choice. Problems identified were documented and discussed with the concerned physician.
RESULTS: The case sheets of 200 patients were reviewed during the study period, out of which184 DRPs were identified from 172 patients. The most common DRP was found to be drug selection (92%), which includes drug duplication (36%), untreated indication (36%), inappropriate combination of drug (28%), drug use without indication (28%) followed by patient related factors (62.5%), dose selection (7%), treatment duration (2%), drug use process (2%) and drug form (1.5%).
CONCLUSION: The mean number of DRPs per patient increased linearly with increased number of drugs used which indicates that the risk of having a DRP increases with each additional drug supplied. The relationship between the increased number of drugs used and increased number of DRPs is strong. Hence, polypharmacy stands out as a risk factor for developing DRPs.

keywords: Drug related problems, polypharmacy, geriatrics, adverse drug reactions.

Abstract no:5

Pharmacoepidemiological Assessment of Respiratory Diseases in Pediatric Department 0f A Tertiary Care Teaching Hospital

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Respiratory disorders are one of the most common diseases in pediatrics with an increase in morbidity and mortality. The main objective of the study was prescribing pattern of respiratory diseases in pediatrics and assessment of caregiver's perception about pediatric respiratory disease therapy by using questionnaires. A prospective observational study was conducted in 225cases of inpatients and assessment of pediatric respiratory disease therapy questionnaires for caregivers was carried out. Out of 225 patients 122(54.2%) were females and 103(45.8%) were admitted due to respiratory diseases. Maximum number of patients was in the age group of 2-11 years (49.8%). The duration of the hospital stay for most of the patients i.e., 36.4% was found to be 5 days. Most of the patients were admitted due to cough and cold 220(47.36%). Most of the patients have been diagnosed with LRTI 42.2%. It was observed that most of the drugs prescribed were Bronchodilators 36.5%. Among Bronchodilators SABA 258(81.6%) were prescribed. and salbutamol were prescribed more i.e., 77.5%. Most of the bronchodilators were prescribed in the Nebulization form 87% followed by oral formulation (13%). Majority of the antibiotics prescribed were Cephalosporin's (58.8%), and among the Corticosteroid, Budesonide were prescribed most 26.32%. Out of 225 caregivers 88% of them were satisfied with their child's treatment. The study found over use of antibiotics and under use of steroids. Bronchodilators uses were found to be optimal. Educational interventions must be implemented for health care professionals for more appropriate and cost-effective prescribing.

Abstract no:6

Budd-Chiari Syndrome: A Case Report

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Budd-Chiari syndrome (BCS) is a rare disorder, which is characterized by obstruction of veins of the liver that carry blood from the liver which is associated with hepatic thrombosis, ascites, hepatomegaly, and upper quadrant pain. Depending upon the site and number of veins affected the severity of the disorder varies from case to case. BCS occurs in 1 in 100, 000 of the general population worldwide. It is a rare but an important syndrome because many disorders, such as hematologic or malignant diseases, may be complicated with Budd- Chiari syndrome.

We report a case of a 59-year-old male patient who presented with complaints of abdominal distension, swelling of lower limbs, and scrotal swelling. He also had breathlessness, pallor, and icterus. Medical history stated that he is a known case of BCS and had undergone IVC stenting in August 2018. All the liver enzymes were found to be deranged. Upon further examination, abdominal sonography revealed an enlarged liver with venous outflow obstruction and massive ascites. Fluid thrill test was found to be positive along with distended bilateral veins. Ascites tapping was done and analyzed. Ascites fluid consisted of transudate, and neither malignant cells nor bacteria were recognized. The patient was treated symptomatically and found to be recovering. BCS can be potentially lethal in absence of proper management. Good prognosis and prevention of recurrence can be achieved with an appropriate therapeutic regimen.

keywords: Budd-Chiari syndrome, ascites, hepatic thrombosis, hepatomegaly, diuretics

Abstract no:7

Assessing Knowledge Attitude and Practice as Determinants of Sedentary Lifestyle Among Indian Young Adults: A Cross-Sectional Survey.

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Sedentary lifestyle is preventable yet rampant among young adults because of the modern day habits that promote least energy expenditure. This survey was conducted to assess the knowledge, attitude and practice as determinants of sedentary lifestyle among young adults in India. The sample consisted of 309 people with mean age of 20.38 (±1.35), out of this 95 (30.70%) were male and 214 (69.25%) were female. The survey included a questionnaire with 29 questions, classified into 5 sections, distributed electronically. The scoring system assessed the degree of risk of each participants from their sedentary life and categorized into A, B, C, D or E based on the pattern of knowledge, attitude and practice they exhibit. 242 (78%) of the total respondents were found to be sedentary by practice. The study findings revealed that an individual's attitude has a definite link to their sedentary practices. Although equipped with basic knowledge, participants fail to the extent of sedentary behavior in their daily lives. Individuals at highest risk from sedentary lifestyle were those who had no basic knowledge, were reluctant to change and had sedentary practices.

CONCLUSION: The study concluded the necessity of well-developed campaign that not only brings about awareness, but also lets individuals assess, recognize their sedentary behavior and help them adapt right interventions into their daily routines.

Abstract no:8

Utilization Pattern of Corticosteroids in Dermatology

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INTRODUCTION- Skin diseases are a significant problem all over the world. Corticosteroids are one of the most commonly prescribed drugs in the skin diseases due to their anti-inflammatory and immunosuppressive actions. The appropriate use of corticosteroids is necessary to obtain best possible effect with safest and least number of drugs, while avoiding under use and abuse which may lead to sub-therapeutic dose (non-responsive) and adverse effects respectively.

AIM- To assess the utilization pattern of corticosteroids in the dermatology department, Jayanagar General Hospital, Bangalore, India.

METHODOLOGY-A hospital based prospective observational study was carried out for a period of 6 months in Jayanagar general hospital, by enrolling outpatients considering study criteria. During the study, 150 prescriptions were studied and patient's records were collected and analyzed for corticosteroids prescription pattern.

RESULT-Out of 150 patients studied, majority of the prescriptions were of females (59.33%) compared to males (40.67%). The study showed most common dermatological problem requiring steroid therapy was Allergic contact dermatitis (50%). The most preferred drug was clobetasol (57.22%). The most preferred route was topical, followed by oral and then parenteral.

CONCLUSION-Although most of the drugs were prescribed rationally. Involvement of a clinical pharmacist in patient care can help in more rational prescribing along with prevention and early detection of ADRs which can directly promote drug safety and better patient outcomes as well as to control misuse and abuse of OTC steroids.

Abstract no:9

Evaluation of Anti-Osteoarthritic Activity of Salvia Hispanica (Chia Seeds) In Rats

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Osteoarthritis (OA) is a classic age-related chronic degenerative disorder. In OA degradation and loss of the articular cartilage is a central feature that is sometimes attributed to “wear and tear”. The present study was designed to evaluate the anti-osteoarthritic activity of Salvia hispanica.

Seeds of Salvia hispanica were extracted with mixture of water and ethanol (30:70). Invivo anti-inflammatory activity and anti-osteoarthritic activity were evaluated. Acute toxicity studies were carried out as per OECD guideline 420.

The effect of hydro alcoholic extract of seeds of Salvia hispanica were screened using models like Corticosteroid induced OA for anti-osteoarthritis and Carrageenan induced paw edema (1% carrageenan) & Cotton pellet method, by implanting 10mg of cotton subcutaneously for anti-inflammatory activity.

Diclofenac sodium (11mg/kg b.w) and alandronate sodium (1mg/kg b.w) were used as reference standard, the degree of protection was determined by bone density, bone width, serum calcium, and phosphorous for anti-osteoarthritis and granuloma tissue formation and paw volume were evaluated for anti-inflammatory effect. Treatment with hydro alcoholic extract of chia seeds significantly increased serum calcium, phosphorous and bone density favouring anti-osteoarthritic activity, and it also exhibited inhibition in granuloma tissue formation and decrease in paw volume facilitating anti-inflammatory activity. Further the histopathological evaluation revealed decrease in parameters like bone resorption, cyst formation and depth surface induced by corticosteroids which may be helpful in preventing osteoarthritis and inflammation respectively.

Abstract no:10

Pharmacoepidemiological Assessment of Insulin Therapy in Type 2 Diabetes Mellitus

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Rational prescribing of insulin and improved patient knowledge, attitude and practice regarding insulin usage will optimise insulin therapy in diabetes mellitus. A retrospective case analysis was conducted in medical record department of tertiary care teaching hospital to assess the prescribing pattern and a prospective study to assess the knowledge, attitude and practice of insulin therapy. A total of 190 case records of diabetic patients with insulin therapy were reviewed. A cross sectional study was also done in 70 patients using KAP questionnaire. A total 70 filled questionnaires were evaluated and analysed using Chi- Square test. Out of 190 study population, male patients were more (52.63%). More number of prescriptions for the age group of 40-60 years (48.96%) with a mean ± SD of age 54.11 ± 12.26. More number of prescriptions with only insulin (56.32%). The most common insulin preparation was insulin human actrapid (70.53%). The most commonly prescribed OHA was biguanides (47.17%). KAP study found that better Knowledge, Attitude and Practice among participants irrespective of their family history and educational status, towards insulin therapy, in which there exist a statistically significant relation (p value <0.05). The study concluded that the drug prescribing pattern for Type 2 Diabetes Mellitus patients were found to be effective to reduce their high blood sugar level. There is a need to educate the patient about various aspects of insulin therapy including dosing storage, site of injection and life style modifications. Clinical pharmacist can play a vital role in monitoring and optimization of insulin therapy.

Keywords: Antidiabetic, Clinical pharmacist, Diabetes mellitus, Insulin, Pharmacoepidemiology

Abstract no:11

A Retrospective Study on Microbial Sensitivity Pattern Of Infectious Diseases in A Secondary Care Hospital, Muvattupuzha

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INTRODUCTION-Antibiotic resistance has become a major worldwide problem. Infections caused by resistant bacteria leads to increased morbidity and mortality than those by susceptible pathogens

OBJECTIVE-To study the prevalence and microbial susceptibility pattern of infectious disease

METHODOLOGY

Study time-4 months (January - April)

Study site-secondary care hospital Muvattupuzha, Kerala

Study type-retrospective observational study

RESULT- A total of 327 specimens collected, 72.7% urine samples, 16.8% pus samples and 10.4% were sputum samples. Culture and sensitivity showed E. coli (66%) as most prevalent bacteria in urine, in case of sputum culture both Klebsiella (53%) and Pseudomonas (47%) are equally prevalent, in case of pus, S. Aureus (65%) as most prevalent organism. From the antibiotic sensitivity study, Penicillin's and Cephalosporins were most resistant and in pus culture, Meropenem was found to be most sensitive drug, in case of sputum culture norfloxacin and gentamycin were found to be more sensitive, in case of urine culture sensitivity pattern varied widely according to organism, in case of E. coli – nitrofurantoin, Klebsiella – netilmicin, pseudomonas – colistin, were found to be more sensitive.

CONCLUSION-The study indicates presence of MDR, ESBL bacteria's which has to be considered as an alarming threat also indicating requirement of locally developed antibiogram to reduce emergence of antibiotic resistance

Abstract no:12

Quality of Life in Women with Polycystic Ovarian Disease: Requisite of Clinical Pharmacist Intervention

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OBJECTIVE: Polycystic ovarian disease (PCOD) is a lifestyle disorder, known to cause profound distress in physical and emotional wellbeing of the patient. Unawareness and ignorance among patients are a predominant cause of compromised quality of life (QOL). The existing study was designed to assess the impact of counselling on QOL in the above patients at a tertiary care hospital.

METHODS: This hospital-based interventional study was carried out from September 2016 to March 2017. A total of 83 subjects diagnosed with PCOD and 89 controls were recruited from the out-patient department of Endocrinology. WHO BREF, a validated, reliable tool to assess QOL was administered during the pre-interventional and post-interventional phases of the study. Awareness regarding disease and lifestyle modification was detailed by a clinical pharmacist to the patients and its impact were assessed using suitable statistical techniques.

RESULTS: Decreased QOL was observed in women affected with PCOD when compared to healthy controls, wherein the psychological domain was most affected. Post the intervention, the positive impact was reflected as higher scores in all four domains such as Physical Health (58.45 ± 8.79); Psychological (53.457 ± 10.71); Social Relationships (58.060 ± 13.51) and Environment: 57.34 ± 9.80.

CONCLUSION: Women suffering from PCOD exhibits varied symptoms that can be managed conveniently by spreading awareness. The study findings reveal that women with PCOD showed an improved QOL post participation in awareness programs imparted by the clinical pharmacists.

Keywords: Polycystic ovarian disease, Quality of life, Counseling

Abstract no:13

A Study on Toxicity Profile of Metronomic Doses of Cisplatin In Experimental Animals

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The present study evaluates the toxicity profile of metronomic doses of cisplatin. Anticancer treatment causes severe toxicity and drastic medical complications in the body like, major organ toxicities, alopecia, Nausea etc. This can be overcome by the novel approaches to chemotherapy. One of such approaches includes metronomic chemotherapy, this strategy can be applied for the drugs which possess severe toxicity at its maximum tolerated dose. Albino rats of both sex were grouped into five groups of 15 each and kept in separate cages. Animals were treated with 1/10th and 1/20th of therapeutic dose for 30, 90 and 180 days. The assessment of toxicity of test drug in all the dose regimens were established in 4 important categories - Gross Behaviour (Body weight, Food consumption, Gross Animal observations), Hematology, Clinical Biochemistry and Histopathology after 30 days, 90 days and 180 days of treatment in comparison with control group. Both the dose regimens enhanced the body weight of male animals, and the weight of female animals initially increased then decreased after 30 days. Hematological studies revealed that the levels of RBC and WBC were slightly decreased. Increased level of SGPT and SGOT was observed indicating liver complications, which was clarified by histopathology studies and Urea levels were decreased. The histopathological results were insignificant and no complications were observed, which infers that metronomic doses of cisplatin at 1/10 th and 1/20 th dose possess minimum toxicity and not cytotoxic.

Keywords : Cancer, Metronomic therapy, Toxicity

Abstract no:14

Signals of Progressive Multifocal Leukoencephalopathy for Immunosuppressants: A Disproportionality Analysis of Spontaneous Reports Within the Us Adverse Event Reporting System (Aers)

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INTRODUCTION: Purpose Progressive multifocal leukoencephalopathy (PML) is a rare demyelinating disease of the central nervous system that has been reported as rare adverse drug reaction (ADR) of immunosuppressive drugs. We aimed to study signals of PML for immunosuppressants using a disproportionality analysis of spontaneous adverse event reports.
METHOD: Within the US Adverse Event Reporting System, we analyzed all reports of ADRs submitted to the US Food and Drug Administration between January 1, 2004 and September 30, 2010. We used univariate and multivariate logistic regression analysis to calculate reporting odds ratios with 95% confidence intervals of PML for immunosuppressants according to the Anatomical Therapeutic Chemical classification system (L04), rituximab and cyclophosphamide compared to all other drugs.
RESULTS: We identified 635 PML cases in a total of 19,78,706 patients eligible for analysis. Altogether, 21 out of 36 analyzed immunosuppressants were reported at least once with PML. In the univariate analyses, we found a signal for 11 of these drugs (azathioprine, cyclosporine, cyclophosphamide, efalizumab, leflunomide, methotrexate, mycophenolate mofetil, natalizumab, rituximab, tacrolimus and sirolimus). In the multivariate analysis, the signal was no longer present for sirolimus, leflunomide and methotrexate.
CONCLUSION: Our study revealed signals of PML for a substantial number of immunosuppressants, including some drugs less considered so far as a risk factor of PML, especially when used for the treatment of autoimmune disorders. These drugs and possible interactions between different immunosuppressants should be studied more closely in future studies.

Keywords: progressive multifocal leukoencephalopathy; immunosuppressants; adverse event reporting system; spontaneous reports; pharmacoepidemiology.

Abstract no:15

A Comparative Efficacy Study of Metformin and Insulin on Neonatal Outcomes and Impact of Patient Counselling in Improving Medication Adherence Among Gestational Diabetes Mellitus Patients

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BACKGROUND: Pregnancy is a potentially glucose intolerant condition and in all pregnancy's insulin sensitivity decreases as pregnancy advances. This predisposes to development of gestational diabetes mellitus. Different treatment options are available for GDM. When the first line medical nutrition therapy fails to achieve adequate glucose control, pharmacotherapy is implemented which include oral hypoglycemic agents like metformin and insulin replacement therapy is also preferred.

AIM*:* To assess the efficacy of Metformin and insulin on neonatal outcomes in GDM patients.

OBJECTIVE*:* 1. To study and compare the difference in efficacy of Metformin and insulin on neonatal outcomes. 2. Impact of patient counselling in improving medication adherence.

MATERIALS AND METHOD*:* It is a prospective observational study in which the sample size is divided into 2 groups. One receiving Metformin and other Insulin. Optimum glycemic control between the two groups were studied along with maternal and neonatal outcomes. Impact of patient counselling was assessed using MMAS scale.

RESULTS*:* Glycemic control of both the groups were 95%. Majority of insulin group (60%) had pre-term delivery while majority of metformin group had normal delivery (85%). Neonatal hyperbilirubinemia was higher in insulin group (60%) than in metformin group (35%).

DISCUSSION*:* Through our study, it was found maternal glycemic control and most of the neonatal outcomes (birth weight, APGAR score) were comparable between two groups. Neonatal hyper bilirubinemia and gestational age of delivery were having significant difference between two groups.

CONCLUSION*:* Metformin is found to be as effective as Insulin in the treatment of Gestational Diabetes Mellitus. Compared to Insulin, Metformin is a safer, cheap and convenient first line drug of choice for Gestational Diabetes Mellitus.

Abstract no:16

A Study of Utilization Pattern of Quinolone Antibiotics in a Tertiary Care Hospital.

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OBJECTIVES: The main aim of the project was to analyze the utilization pattern of quinolones and to ensure that they are prescribed in accordance with the hospital formulary and hospital guidelines so as to prevent development of antibacterial resistance.

METHODOLOGY: A cross-sectional, prospective, observational study was conducted on patients admitted in inpatient departments of Sagar Hospitals, Bangalore for a period of 6 months. 154 patients were enrolled and the details about the general information about patient, diagnosis, culture and sensitivity report, antimicrobials prescribed were collected.

RESULTS: In the study 152 prescriptions being assessed which contained total of 1482 drugs of which 255 (17.2%) drugs were antibacterial. Out of these 255 antibacterial Quinolones constituted to 10.2% (26). Maximum utilization of quinolones was seen in pulmonology department (34.6%). Most commonly prescribed drug among quinolones was Levofloxacin (42.3%). Mostly drugs were prescribed as monotherapy and given as parenteral dosage forms.

Conclusion: quinolones are the broad-spectrum antibiotic approved by FDA to treat conditions like LRTI, skin infection and UTI. Having been observed that in the study conducted maximum utilization of quinolones was seen in pulmonology department which mostly included LRTI cases, it can be concluded that quinolones were prescribed in compliance to the hospital guidelines.

Keywords: Quinolone Antibiotics, Utilization Pattern, Antibacterial Resistance.

Abstract no:17

Anti-proliferative and apoptosis induction potentials of Cynanchum callialatum on MCF cancer cell lines and in invivo models

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Cynanchum is a genus of about 300 species including some swallowwort's, belongs to the milkweed family Asclepiadaceae. The leaves are usually oppositely arranged and sometimes are borne on petioles. The inflorescences and flowers come in a variety of shapes. Antiproliferative, apoptosis induction studies, anti-inflammatory studies and in vivo anticancer studies has been studied by various methods and models with CCEE. The *Cynanchum callialatum* ethyl acetate extarcts (CCEE) showed potential cyctoxicity against MCF-7 cell lines. The results showed that MCF-7 cell proliferation was significantly inhibited by CCEE with the IC50 value 560 and 300µg/ml as against the standard drug doxorubicin with the IC50 value of 2.38 µg/ml. The effect CCEE on cell cycle was studied using flow cytometry in MCF-7 cell lines. The percentage of cell in various phases like G0/G1,S and G2/M phase of the cell were calculated. The results shows that the CCEE inhibited cells in the G0/G1 phase in the MCF-7 cells. Doxorubicin arrested the G2/M phase of the cell in MCF-7 cells. Apoptotic changes in cells may be studied using AO/EB fluorescent staining. The apoptotic effect of CCEE was studied in MCF-7cell lines and the percentage of apoptotic cells were calculated. The levels of p-53, phospho-p53, Bad, phospho-Bad, cleaved caspase 3 and cleaved PARP in MCF-7cell lines were studied by ELISA method. There was a slight decrease in p53 in doxorubicin. The markers were significantly increased by all the treatments when compared to the normal control cells. Lifespan of ascites tumor bearing animals induced by EAC cells was found to be increased by CCEE in 200mg/kg and 400mg/kg treatment. In CCEE 400mg/kg group the lifespan was increased by 72.6% and in CCEE 200mg/kg b.wt group the increase was 57.14%. In CCEE 400mg/kg group there was a significant increase in lifespan ($p<0.001$) of 72.6%compared to EAC control. Similar findings were also reported in DLA solid tumor model. Therefore, the effect of CCEE on the inhibition of IL-1β and TNF-α was investigated. The IL-1β and TNF-α levels in supernatants of cells treated with CCEE were significantly decreased compared with the LPS group, in a dose-dependent manner. Our research indicates that these two plants possess anticancer and anti-inflammatory activities which may be due to the presence of active phytoconstituents flavonoids and phenolic compounds. It can be concluded that the both the plant extracts may be a source of new compounds for anticancer and anti-inflammatory.

Keywords: *Cynanchum callialatum,* Antiproliferative, apoptosis induction studies, anti-inflammatory.

Abstract no:18

Prescribing Pattern of Beta Lactam Antibiotics in Pediatrics

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AIM: This pilot study aims to assess the prescribing pattern of beta lactam antibiotics in pediatric subjects.
MATERIALS AND METHODS: Informed consent as per ICMR guidelines were obtained from caretakers of pediatric subjects. Case records were analyzed to identify the prescribing pattern of antibiotics. Required data were collected using a suitably designed proforma.
RESULTS: 30 subjects with a mean age 6.5±1.35 years were involved in the study. 66.67% of the subjects belongs to male respondents and 33.33% belongs to female population. 56.67% of the subjects were involved in the age category of 2 to 5 years and 6.67% of subjects belongs to age category in between 10 to 12 years. 76.67% of pediatric subjects have a diagnosis of respiratory tract infection. No cases of CNS disorders were reported. 43.33% of Ceftizoxime, 23.33% of Cefotaxime, 13.34% of Amoxicillin+ Clavulanic acid, 10% Cefuroxime, 6.67% Ceftriaxone and 3.33% of Cefaperazone + Tazobactum were prescribed for these pediatric subjects for various infectious states.
CONCLUSION: Use of antibiotics in pediatric subjects requires great care considering the increased incidence of antibiotic resistance. From this pilot study beta lactam antibiotics were found to be prescribed commonly due to its safety and efficacy in pediatric subjects.

Keywords: Antibiotics, Pediatrics, beta lactam, prescription pattern

Abstract no:19

Assessment of Prevalence and Risk Factors of Diabetes Mellitus and Hypertension in An Urban Community

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BACKGROUND: The magnitude of Non-Communicable Diseases (NCDs) is tremendously increasing which necessitates the assessment of prevalence and risk factors of diseases like Diabetes Mellitus (DM) and Hypertension (HTN).
AIM AND OBJECTIVES: To identify the prevalence and major risk factors of DM and HTN.
METHODOLOGY: A cross-sectional study was conducted for a period of 6 months among 201 residents of Central Power Research Institute (CPRI), Bangalore who aged 18 years and above. Structured World Health Organization (WHO) stepwise questionnaire was used as the study tool to find the prevalence and risk factors of DM and HTN.
RESULTS: Among the whole population, 19.4% (39) were observed to have HTN among which 39-58 years aged individuals ($P<0.05$) had HTN due to their sedentary lifestyle, 13.4% (27) had DM, 5% (10) were alcoholics, 1.5% (3) were smokers, 4.5% (9) were alcoholics as well as smokers, 50.2% (101) were overweight and 39.3% (79) of the population were found to be physically inactive.
CONCLUSION: The study results highlight the necessity of a prompt action in placing a barricade for minimizing the incidence of DM and HTN.

Keywords: Diabetes mellitus, Hypertension, Risk factor, WHO stepwise questionnaire, Non-Communicable Diseases

Abstract no:20

A Study on Bioequivalence of Formulation Containing Glimepiride and Metformin Obtained from Janaushadhi Kendra And Branded Generic Formulation in Rabbits

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The present study evaluates bio-equivalence of Jan-aushadhi drugs and branded formulation. Most medications for type 2 diabetes are oral drugs usually given for a lifetime, therefore the cost of drugs plays a vital role. But many of these medicines are priced high. The poor in India are still unable to afford medicines, hence the government of India took an initiative by launching Jan-aushadhi scheme which is aimed at providing lifesaving quality medicine available at affordable cost. But the people in India are still not opting for generic medicines from Jan-aushadhi Kendra because of the misconception regarding efficacy and quality of medicines.

RP-HPLC method for estimation of metformin and glimepiride in plasma was developed and validated according to ICH guidelines with ranitidine as the internal standard. To access the pharmacokinetic and pharmacodynamics, animals were divided into three groups each containing 5 animals. blood samples were collected by marginal ear vein at 0,1,2,3,4,6,8,12,18,24hrs Plasma was collected by centrifugation and analyzed by HPLC. Pharmacodynamics studies were carried out using an autoanalyzer. Bioequivalence is established if geometric mean ratios of test to reference formulations for Cmax and AUC is within the predetermined regulatory range of 80-125%.

Conclusion-Test formulation of Jan aushadhi drugs was bioequivalent to branded formulation as the range falls between the above-mentioned range. This will enhance the public participation in popularizing the usage of Jan-aushadhi drugs.

Abstract no:21

Azacitidine Induced Extravasation: A Case Report

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Extravasation of cytotoxic drugs have a more assertive impact as compared to that of any other drug. This is an attribute of its possible outcomes of necrosis, which can leave the tissue permanently damaged. Most treatment protocols especially for hemato-oncology cancers include Azacitidine. While the drug has an active profile in treating cancer, its possibility to cause serious adverse events has not been explored. The number of cases reports elucidating Azacitidine induced EV are negligible. A 55-year-old male was diagnosed with Acute Myeloid Leukemia-Stage I. Evidence of liver injury was also observed. Following diagnosis Single drug azacitidine chemotherapy was suggested. On Day 1 of infusion, the patient complained of pain and difficulty to move his right hand one hour after completing infusion. The clinical pharmacist, upon examining the patient's symptoms, analyzing the medication chart and after consulting the treating physician, concluded that the patient had suffered Extravasation induced by Azacitidine of grade 2 severity. The cannula was removed and appropriate records were written and filed regarding the incident. Based on the patient's present condition and risk factors it was decided that the site of infusion affected will not be repeated for the upcoming cycles unless necessary. Patient upon follow up (after 1 week), presented with complete recovery of the incident evading any possible lasting damage. A multidisciplinary approach has shown to provide best results to ensure minimum impact of extravasation of patients and report cases vigilantly and accurately.

Keywords: Extravasation, Azacitidine, Inflammitant, AML, Clinical Pharmacist

Abstract no:22

Incidence of Hypoglycemia in Diabetic Patients Hospitalized in A Quaternary Care Centre In South India

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Hypoglycemia is one of the major concerns in hospitalized patients and occurs in 7.7% of hospital admissions which result in increased length of stay and mortality rate. The aim of this study was to identify the incidence of hypoglycemia in diabetic hospitalized patients and to analyze the risk factors. This study was carried out prospectively on adult, nonpregnant, type II diabetic patients admitted in a Quaternary Care Centre in South India. Factors influencing hypoglycemic events such as clinical condition of the patient, type of feed, regular monitoring and surgical status were analyzed. Blood glucose measurement was done by point-of-care testing and the study revealed that 14.25% of the diabetic patients developed hypoglycemia during their hospital stay and the incidence of hypoglycemic events was found to be 31.25%. Majority of them experienced hypoglycemia only once during their hospital stay, 47% of them had multiple episodes (2-7 hypoglycemic attack) . Risk factors such as duration of diabetes, blood sugar at the time of admission, type of feed, surgical status and death significantly differ (P<0.05) among patients in the critical as well as non-critical area. There was significant difference in age (P=0.001), patient location (P=0.000), type of feed (P=0.003), regular monitoring (P=0.00) and death (p=0.000) among diabetic and nondiabetic patients. Hypoglycemia could be considered as a marker for disease severity and inpatient mortality increases when spontaneous hypoglycemia episodes occur. Regular monitoring, proper feed and early referral to specialists in case of fluctuating blood sugars may help to reduce the hypoglycemic episodes.

Abstract no:23

Pharmacovigilance Amongst Elderly Males Visting An Outpatient Clinic of a Tertiary Care Hospital

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OBJECTIVES: Ageing is associated with several physiological changes of organ systems exposing them to multiple co-morbidities which progressively increases the requirement for drugs. Avid drug use places the elderly at risk for adverse drug reactions (ADRs). This study was conducted to monitor, identify and report ADRs amongst elderly males in our setting.

METHODOLOGY: This six-month prospective hospital based observational study was conducted in all male patients aged 60 years and above visiting the outpatient geriatric clinic. The nature of the suspected ADR, suspected drugs and relevant clinical information were recorded. Suspected ADRs were categorized and causality assessment was done by applying WHO-UMC criteria and Naranjo's scale. Severity and preventability of ADRs were classified using Modified Hartwig and Seigel scale and Modified Schumock and Thorton scale, respectively.

RESULTS: A total of 224 males were included amongst whom 33 (14.7%) experienced an ADR. The drug classes mostly accounted were antihypertensives 16 (48.5%) followed by antidiabetics 4 (12.1%). Type A reactions 30 (91%) were more compared to type B and 27 (81.85) were predictable. Severity assessment revealed that majority were mild 21 (63.6%) followed by moderate reactions. Amongst reported reactions, 7 (21.2%) were probably preventable and causality assessment demonstrated 28 (84.8%) and 20 (60.6%) probable reactions based on Naranjo and WHO- UMC scales, respectively.

CONCLUSION: High prescribing rates, although associated with severity of illness and severe morbidity, may also increase occurrence of ADRs. This necessitates a need to develop and implement strategies to minimize ADRs and increase safety amongst elderly.

Abstract no:24

Drug Utilization in Cardiovascular Diseases

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CVDs have emerged as a leading cause of mortality and morbidity in the world as well as in India. CVDs are showing an escalated trend due to the changes in life style and social habits. Drugs are the bedrock of treatment and prevention of CVDs. Factors like low utilization rates of evidence-based therapies, high drug cost and long duration of therapy hinder the rational usage of CVDs. About 17.9 million people die each year from CVDs. 85% of all deaths are due to heart attacks and strokes. To observe the cardiovascular emergencies which were most frequently treated and to quantify the drug utilization trends in the cardiovascular emergencies in terms of the defined daily doses and the prescribing prevalence in the cardiovascular emergencies. The objective of this study was to determine the drug utilization pattern in CVDs. A wide variation exists in the patterns of pharmacotherapy among patients admitted with CVDs. In the present study we collected the data of 100 patients. Results indicated that males (55%) patients had a high frequency of cardiovascular incidences as compared to females (45%) patients. Out of 100 patients 20% patients has Ischemic heart disease (IHD), 31% hypertension (HTN), 10% myocardial infarction (MI), 10% cardiovascular atherosclerosis. Most commonly prescribed drugs were found to be B- blocker (52%), loop diuretics (42%), calcium channel blocker (32%), Angiotensin converting enzyme inhibitors (30%). Recently treatment initiation with combination of two or more drugs has been also recommended. Drug usage is life saving and at times many drugs are needed. Drug utilization studies aid to find the appropriateness of treatment, identify shortcomings if any, and provide a feedback to the health care providers to improve their management with drugs. The correct use of cardiovascular drugs in patients has been shown to decrease the risk associated with cardiovascular morbidity and mortality. Drug utilization evaluation of cardiovascular drugs helps to promote rational prescribing pattern in disease management which improves the patient quality of life.

Abstract no:25

Clinical Pharmacist in Nephrology Department:Ensuring Patient Safety

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Clinical Pharmacy is an emerging field in India and clinical pharmacists are playing a vital role in ensuring patient safety. The objective of the study was to identify drug related problems in the renal failure patients and to make suitable recommendations for the same. This study was conducted in a quaternary care hospital in South India for one year. The prescriptions of renal failure patients admitted in the hospital were audited prospectively and the drug related problems were classified based on Pharmaceutical Care Network Europe (PCNE) classification. A total of 548 prescriptions were audited and 94 medication errors (17%) were identified. Medication errors were found in dose selection (58%), dosage form (8%), drug selection (32%) and treatment duration (2%). Inappropriate combination of drugs and therapeutic duplication were the most common causes of drug selection errors whereas necessity of renal dose adjustment and too frequent dosage regimen were the predominant factors of dose selection errors. As per the recommendation of the clinical pharmacist, dose changed in 49% cases, drug stopped in 28% cases, drug changed to another in 10% cases, formulation changed in 8% cases and new drug started in 3% cases. The impact of clinical pharmacist intervention includes de-escalation of antibiotic (9%), dose optimization (43%), prevention of drug interaction (9%), drug optimization (25%), parenteral to oral conversion (8%) and avoidance of therapeutic duplication (6%). In conclusion, such studies are needed for minimizing the medication errors as it showed a positive impact on patient care.

Abstract no:26

Exploring Essential Fatty acids from Sugarcane in Diabetic Neuropathy – Ayurnutripharmaco Approach

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Among the vast majority of non-communicable diseases, diabetes is ranked at the top of cascades, which is characterized by high blood glucose level. Basic technologies for early detection and monitoring of diabetes become conditional. Availability of insulin, metformin and sulphonylurea is very limited in primary care facilities and has prolonged side effects. Complications due hyperglycemia leads to secondary disorders namely diabetic neuropathy (DN), retinopathy, nephropathy and cardiovascular diseases. With this background, the current study was designed towards exploring complementary and alternative medicine (CAM) using phytobioactives (sugarcane essential fatty acids) for treating diabetic neuropathy (peripheral). The study aims at a holistic approach amalgamating Ayurpharmacology, Biochemistry, Neurobiology and Bioinformatics. The role of key enzymes (targets: ACC1, ACC2, Nitric oxide synthase, Cyclooxygenase-2, Aldol reductase and Sorbitol reductase) involved in glucose metabolism, Inflammation and neuro- degeneration pathways were analyzed for their structure-activity relationship (SAR) with sugarcane essential fatty acids (Isopropyl linoleate and Monolinolenin), in contrast to standard drugs such as Metformin, Indomethacin and Captropil respectively. Bio permeability across blood-brain barrier of the ligand molecules were also analyzed using boiled-egg model. Pharmacokinetics and pharmacology were assessed by Pre-ADMET software. Further, the biomarkers selected have also been hypothesized to influence the dynamics of gut microbiota functioning via regulating AMPs (antimicrobial peptides). The neuronal dynamics is not much explored which gives a scope to understand the gut-brain axes and the trafficking of related microbiome which influence beneficial short-chain fatty acids. The results from the current study will pave newer way for exploring phytobioactives induced neuronal dynamics in diabetic neuropathy which ultimately aims to “Make Food as Medicine”.

Abstract no:27

Prescribing Pattern of Oral Hypoglycemic Agents in Type 2 Diabetes Mellitus in a Tertiary Care Hospital.

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OBJECTIVES: The main aim of the study was to analyze the current prescription pattern of oral hypoglycemic agents (OHAs) used in the treatment of Type II diabetes mellitus patients and the potential drug interaction with OHAs.

METHODOLOGY: A prospective, observational study was conducted on patients admitted at inpatient departments for a period of 6 months.

RESULT: Out of 106 prescriptions, 56 (53%) and 50 (47%) were men and women respectively, where 28(52.60%) were in the age group of 71-80 years with a mean of 63 (SD±12) years. A total of 1025 drugs were prescribed, with mean of 9 ± 3.51 drugs per patient and out of which 141 drugs were OHAs with mean of 1.33± 0.56 per patient. As monotherapy, Metformin was frequently 44 (31.2%) prescribed. The combination of Glimepiride and Metformin were most frequently prescribed in 33 (45%) patients. Out of 74 OHA combinations, it was found that 136 of the potential drug-drug interactions (DDIs) were of "moderate" severity. The most common potential DDI observed was between Metformin and Salbutamol (n=16).

CONCLUSION: Metformin was the most frequently prescribed drug. Metformin and Glimepiride were the most frequent combination used. Newer antidiabetic agents have been prescribed in combination only.

Keywords: Oral Hypoglycemic Agents, Type II Diabetes mellitus, Metformin.

Abstract no:28

A Prospective Study on The Efficacy of Tadalafil In Patients with Benign Prostatic Hyperplasia

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BACKGROUND: Benign prostatic hyperplasia (BPH) is one of the most common urological problem in aging man over the age of 50 yrs. Tadalafil is a drug which is initially given for Erectile dysfunction (ED) and found to be effective in: Benign prostatic hyperplasia (BPH) associated with Erectile dysfunction (ED).
AIM: To assess the efficacy of Tadalafil 5mg OD in Benign prostatic hyperplasia patients.
MATERIALS AND METHOD: The efficacy of Tadalafil was assessed in 62 patients by using) International prostate symptom score (IPSS) and Ultrasonography (USG), the patients were asked to review after one months of drug therapy.
RESULTS AND DISCUSSION: Tadalafil 5mg OD has significant change on IPSS (54.1%) and USG (21.7%) i.e. there was more significant improvement in IPSS when compared to USG prostate and residual volume. Thus, the symptomatic relief with tadalafil after treatment is much more than its effect in prostate and residual volume.
CONCLUSION: Tadalafil 5mg OD is found to bring clinically significant improvement in Lower urinary tract symptoms (LUTS), secondary to BPH and there was a significant improvement in the IPSS and USG after the treatment.

Keywords: Benign prostatic hyperplasia (BPH), Lower urinary tract symptoms (LUTS), Ultrasonography (USG), Erectile dysfunction (ED)International prostate symptom score (IPSS}

Abstract no:29

Prevalence and Pattern of Self-Medication Practices in a Rural Area of Chickballapur.

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BACKGROUND: Self-medication is defined as the process of obtaining and consuming one or more drug(s) without the advice of a physician either for diagnosis, prescription or surveillance of treatment. Over-the-counter (OTC) drugs are abused for self-medication due to lack of knowledge on correct dose, side-effects and interactions that could have serious implications, especially in special population. Pharmacists and pharmacy attendants play an important role in fostering self-medication among the public. A questionnaire-based study was conducted to assess the prevalence, pattern, and perception of self-medication among the rural population of Chickballapur, South Karnataka.
AIM: To find the prevalence and pattern of self-medication practices
METHOD: A questionnaire-based observational study was carried out to assess the knowledge, awareness and perception of self-medication practices by house-to-house survey.
RESULT: Out of 248 participants enrolled, 189 responded for all the questions (76.2%). The prevalence of self-medication in the study population was more common in females 98 (51.85%) as compared to males 91 (48.14%) and it was more common in persons between 41-50 years of age 38 (20.1%). Most common conditions/symptoms for self-medication were fever 72 (32.14%), headache 54 (24.1%) and body ache 44 (19.64%), followed by cold/cough 29 (%) and diarrhea 7 (3.12%) etc.

Keywords: Self-medication, Over-the-counter, Prevalence and KAP.

Abstract no:30

Evaluation of Drug Use Pattern And Behavior in Rural and Urban Population

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INTRODUCTION: Despite planning and tailoring an individualized regimen for a patient, the ultimate success of this is in patient's hands, i.e. "how well the patient adheres to the given regimen".
OBJECTIVE: To identify the medicine taking behavior among rural and urban population.
METHODOLOGY: This is a cross sectional observational study carried out among 300 residents, 150 each drawn from urban and rural communities. Structured validated questionnaire was used and health professionals were excluded from the study.
RESULTS: Out of 300 participants 55.3% of rural and 54.6% of urban participants always adhered to their treatment course,18.6% of rural and 6 % urban population under study altered the given dose on their own always. 53.3% of rural and 38% urban participants always maintained their past prescriptions and carried it with them on their following visit to doctor. On missing a dose 68.6% and 60 % of participants skipped the dose and 12% and 10.6%took it along the next dose and42.6%and 38.6% preferred injection and 57.3%and 61.3% preferred tablet in urban and rural participants respectively. knowledge on effect of food on drug action was assessed, 58% and 64.6% participants had good knowledge.
CONCLUSION: There is significant difference of medicine taking behavior between urban and rural communities. There is a need for implementation of population need – based awareness programme.

Abstract no:31

Prescription analysis: Generic Vs Brand Drugs

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BACKGROUND: - Generic medicines usage compared to their branded counter parts, has the potential to substantially reduce out of pocket expenditure on drug for patients with chronic disease. Brand name drugs are also called innovator drug and they are these types of medication which are patented, manufactured and licensed for the first time.

OBJECTIVE: The main objective of our study is to identify which drugs are more prescribed in terms of Generic or brand and to make awareness about usage of generic drugs by providing information leaflet.

METHODOLOGY: -This is a Prospective observational study conducted randomly for a period of 3 months by following the data collection form. After obtaining the data, educational information was provided to the patient by providing information leaflet about the usage of generic drug and its benefits. The obtained information is interpreted and summarized data by using simple standard mean method.

RESULT- A total of 100 prescriptions were enrolled in this study. Total number of drugs prescribed is 777 (n), average number of drugs prescribed per each prescription 7.7(±7). Majority of the prescriptions were having generic drugs 533(53.3%) compared to the brand 244(24.4%). Average number of generic drugs per each prescription is ±5 and average number of brand drug per each prescription is ±2.

CONCLUSION: This study shows that generic drugs are prescribing more than the brand drug. It is highly helpful to create the awareness about the usage of generic drugs.

Keywords**:** Generic Vs Brand, Prescription.

Abstract no:32

A Rare Entity of Pediatric Meckel's Diverticulum with Ectopic Gastric Mucosa and Soft Tissue Mass.

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Meckel's diverticulum (MD) is the most common congenital malformation of the gastrointestinal tract. It is true intestinal diverticulum that results from the failure of the vitelline duct to obliterate during the fifth week of fetal development. It can be silent or become symptomatic at any age. It is the most common congenital anomaly of the alimentary tract with an estimate prevalence of 1% to 4% in the general population and is more common in children younger than 4 years. A case study on 4-year-old patient with complaints of fever and severe blood in stools was observed then physician suggest the endoscopy, ultrasonography, computed tomography and later meckel's scan was done, which showed ectopic gastric mucosa in right side mid abdomen and a soft tissue mass in second part of duodenum. Segmental surgery of Laproscopic meckel's diverticulectomy with primary anastomosis was performed and treatment was given then the patient was cured.

Keywords: Meckel's diverticulum; Meckel's scan; Ectopic gastric mucosa; Prevalence.

Abstract no:33

Evaluation of Neuro Protection Activity of Bark Of Adina Cordifolia Against Experimentally Induced Neurotoxicity In Rats

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The present study was designed to evaluate the neuroprotective activity of the bark of *Adina cordifolia* on the basis of behavioral, biochemical and histopathological evaluation in rats. *In-vitro* free radical scavenging activity of methonolic extract of Bark of *Adina Cordifolia* (MEBAC) was screened. Acute toxicity studies were carried out as per OECD guideline 423 in which neither mortality nor any signs of toxicity were observed. The neuroprotective activity of MEBAC was tested against Monosodium glutamate (MSG), Aluminium chloride ($AlCl_3$). Bilateral carotid artery occlusion (BCAO)/reperfusion induced neurotoxicity in albino rats. Neurotoxicity was induced in rats by administering MSG, $AlCl_3$ and BCAO for 45 minutes followed by reperfusion for 24 hours. MEBAC (200,300 and 400 mg/kg, p.o) was administered after one hour of MSG, $AlCl_3$ treatment and before one week of BCAO per oral. Vitamin E (50mg/kg) was used as reference standard. The degree of protection was determined by various behavioral and physiological tests, including measuring the levels of antioxidant enzymes like Acetyl cholinesterase, Superoxide dismutase, non-enzymatic antioxidant GSH and lipid peroxidation (LPO). Treatment with MEBAC significantly improved alteration in behavioral and physiological responses, similarly significant decrease in LPO, Ach and increase in GSH, SOD was observed. In groups treated with MEBAC there was reduction in excitotoxicity. MEBAC reduced the histopathological changes induced by MSG, AlCl3 and BCAO/reperfusion. The present study suggests that the MEBAC possesses significant neuroprotective activity in albino rats.

Keywords: *Adina cordifolia*, Neuroprotective, Monosodium glutamate BCAO/reperfusion, vitamin E.

Abstract no:34

Study of Prescribing Pattern of Drugs in Chronic Obstructive Pulmonary Disease in Tertiary Care Teaching Hospital

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Chronic obstructive pulmonary disease, a common preventable and treatable disease has been a major public health problem in this century and is one of the leading causes of morbidity and mortality in the industrialized and the developing countries. This was a prospective study with an aim to analyse the drug prescribing pattern in COPD patients. The study was conducted on patients who were satisfying the inclusion criteria**.** A total of 163 patients admitted in the general and pulmonary medicine departments over six months in NMCH&RC, Karnataka were selected. Out of 163 study population male patients were more (82%), majority of the patients were from the age group of 58-68 years (45.73%). It was found that COPD was more prominent in smokers (39.63%). Bronchodilators were mostly prescribed class of drugs (31.94%) in the management of COPD, followed by antibiotics (25.58%). Among bronchodilator salbutamol (65.89%) was most commonly used. Among antibiotics ceftriaxone was mostly prescribed. Salbutamol with budesonide combination therapy was given in majority of prescriptions followed by Salbutamol + budesonide + Ipratropium bromide. Hypertension (19.63%) was the most common co-morbidity followed by Diabetes mellitus (6.13%) Generic drug prescriptions were found low (1.42% drugs). However most of the drugs prescribed in study populations were from WHO EDL 2017(90.72%).

CONCLUSION- The study concludes that mainly symptomatic treatment was given for COPD patients. Combination therapy was preferred over monotherapy. Bronchodilators were most frequently prescribed class of drugs among COPD drugs. Antimicrobial therapy was given for all patients. Polypharmacy was found in all prescriptions. Diagnosis of COPD lacks spirometry.

Abstract no:35

Development of targeted herbal nanoparticles for colorectal cancer

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Colorectal cancer is the third most common malignancy and the fourth most frequent cause of cancer deaths worldwide. Green synthesized silver nanoparticles have received increased attention in the recent past as potential diagnostic and therapeutic systems in the field of oncology. This study, Aqueous leaf extracts of *Ocimum basilicum* were prepared and which are used as capping as well as stabilizing agent for the synthesis of silver nanoparticles and then they were loaded in alginate microspheres to target the colon. Further they were enteric coated with Eudragit S100 to target the drug release for colorectal cancer. Optimized formulations were subjected to *in vitro* and *in vivo* screening and their anticancer potential against HCT colon cancer were assessed. We found the presence of flavonoid by HPTLC technique and quantified rutin content as 0.18% in the aqueous extract of *Ocimum basilicum.* The prepared nanoparticles were evaluated for various characteristic parameters such as UV–Visible spectral analysis, particle shape by TEM analysis, particle size distribution and zeta potential by zetasizer. We developed nine formulations in which green synthesized silver nanoparticle were loaded in alginate microspheres and they were evaluated for particle size analysis, surface morphology by SEM, loading entrapment efficiency, swelling index and mucoadhesive strength. These studies revealed that they were nano-sized, spherical and the formulations were found to be stable at all the temperature under the stability study. All the formulation was subjected to drug release HCT cell lines dissolution study, among them SNFA5 and SNFB5 were found to be the best formulation, which containing 1:5(drug: polymer) ratio, further the ones coated with Eugragit S100 (SNPFAE1-SNPFAE3), they showed better kinetic drug release mechanism fitting to Korsmeyers Peppa's model and thereby promising a drug delivery to colon in a controlled released manner. From the formulations prepared, the formulation SNPFA3 and SNPFB3 were selected for further *in vitro* cell line study and *in vivo* anti-cancer study. In vivo study on DMH induced colon cancer bearing rats showed that the formulation SNPFA3 at a dose of 10mg/Kg,po. was able to significantly reduce the tumour size as compared to the drug treated as well as by the formulation SNPFB3. Conclusion- All the above study points towards the advantage of using natural products as they are devoid of any major toxic effect.

Keywords **:** Colorectal cancer, Silver nanoparticle**,** *Ocimum sanctum*,.

Abstract no:36

Comparative Study of Efficacy of Amitriptyline and Fluoxetine in Patients Presenting with Mixed Anxiety and Depression

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AIM: To analyses the comparative study of efficacy and tolerability of amitriptyline and fluoxetine in patients presenting with Mixed-Anxiety and Depression.

INTRODUCTION: Mixed anxiety and depression is a condition where both the symptoms of anxiety and depression are present. Globally, depression is the top cause of illness and disability among young and middle-aged populations, while suicide ranks second among causes of death for the same age groups. Depression increase the mortality because it worsens many medical conditions such as cardiovascular disease and diabetes and increase risk of suicide.

METHODOLOGY: A prospective observational study was conducted for a period of 6 months in OPD of Jayanagar General Hospital, Bengaluru and BBMP Public health camps. Patient aged between 19-59 years with mixed anxiety and depression (as defined by ICD 10) were equally divided randomly in fluoxetine and amitriptyline groups. Patients assessment was done at 1 st visit, 2 nd week, 4 th week and 8 th week for efficacy and safety parameters such as HAM-A and HAM-D. Student t-test and ANOVA was performed on efficacy measure.

RESULTS: In the total of 62 patients, 25 (40.32%) were male and 37 (59.68%) were female. On HAM-A the percentage improvement (reduction in the mean score) for fluoxetine group was 43.95% on 2^{nd} week, 78% on 4 th week and 92.37% on 8th week while that for the amitriptyline group was 38.44% on 2^{nd} week, 67.7% on 4th week and 89.21% on 8th week. HAM-D the percentage improvement (reduction in the mean score) for fluoxetine group was 48.45% on 2nd week, 80.22% on 4th week and 92.34% on 8th week while in amitriptyline group 38.89% on 2 nd, 69.82% on 4th week and 89.29% on 8th week.

CONCLUSION: Our study shows Fluoxetine apparently working faster than Amitriptyline. Fluoxetine being an SSRI claimed to be equally effective as TCA in treating Mixed Anxiety and Depression with least adverse effects and better tolerability.

Abstract no:37

Study on Drug Utilization Review and Potential Drug-Drug Interactions in Chronic Kidney Disease Patients

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BACKGROUND: Chronic kidney disease (CKD) is a worldwide health crisis. Life expectancy increased significantly among CKD patients due to the extensive use of Polypharmacy for prescriptions. This predisposes them to potential drug–drug interactions (DDIs).
OBJECTIVES: The aim of the present study is to evaluate the drug utilization review and to assess the potential drug-drug interaction in CKD patients.
METHODS: This study was a prospective observational & analytical study conducted in Sagar Hospitals, Bengaluru. The information was collected from patient profile form, the prescribing pattern analyzed and potential drug–drug interactions were evaluated by using Micromedex, clinirex and drugs.com.
RESULTS: This study reveals that the males were more prone to CKD (63%) than females (37%) and the highest percentage of patients are in the age group with the average of 66.40 ± 3.92 years. Among all medications the major class of drugs prescribed were anti-hypertensives & the least were drugs acting on thyroid. A total of 547 potential DDIs were observed of which moderate DDI (64.71%) were highest followed by minor (21.75%) & major (13.34%). Based on the statistical analysis performed the prevalence of DDI in males (61.6%), an age group of 61-75, and the patients with two comorbidities were reported the highest. With the increase in number of drugs prescribed there was significant increase in the no. of DDIs which was statistically proved in the patients prescribed with >16 drugs. Further there was proportional increase in the number of DDIs with increase in the length of hospital stay of about 6-10 days which was not proved significant.
CONCLUSION: The use of Polypharmacy for the treatment of multiple co-morbid conditions has been proved to be as one of the most important factors in patients with CKD. Polypharmacy can predispose to drug interactions which results in the failure of the drug therapy and increase in the length of hospital stay. The active participation of clinical pharmacist in clinical activities can help in minimizing the risk and improving the patient care.

Keywords**:** Chronic kidney disease (CKD), Drug-Drug interactions (DDIs), Drug utilization review (DUR)

Abstract no:38

A prospective epidemiological study on management of A prospective epidemiological study on management of hyperphosphatemia in maintenance hemodialysis patients

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BACKGROUND-Hyperphosphatemia is a common complication of End Stage Renal Disease associated with fluctuating serum calcium, PTH and metastatic calcification. Based on the calcium phosphorus level, patients may receive Calcium free drug or calcium-based drugs along with phosphorus restricted diet.
OBJECTIVE: To study the epidemiology and treatment pattern of calcium free and calcium-based drugs for management of hyperphosphatemia in maintenance HD patients.
METHODOLOGY- It is a Prospective, observational comparative study, conducted in a tertiary care teaching hospital for a period of 6 months. All patient admitted for HD with End Stage Renal Disease were included and those aged less than 18 were excluded from the study
RESULT-The data drawn from 53 cases based on management of hyperphosphatemia and dietary management indicated that hyperphosphatemia with hypocalcaemia received shelcal (19%), Lanum (32%) and hypercalcemia patients Sevelamer alone (3%) withAlphadol (9%) and those who receive calcium-based drugs (19%). There was almost similar decrease in serum phosphate level with calcium based and calcium free drugs. 14% of patients develop hypercalcemia and 38% better control of LDL with Sevelamer.
CONCLUSION- Poor adherence to diet recommendations is main cofounding factor for hyperphosphatemia. Sevelamer was found to be effective in controlling hyperphosphatemia without incidence of hypercalcemia and helped in decreasing serum LDL. hyperphosphatemia in maintenance hemodialysis patients

Abstract no:39

Assessment of Prevalence and Risk factors associated with Metabolic syndrome among Healthcare professionals.

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INTRODUCTION: Prevalence of Metabolic syndrome in India is varying between 10 to 50% depending on age and gender. Recent studies revealed that in Kerain, one out three adults above 18 years had hypertension and one out of five had diabetes.

AIMS AND OBJECTIVES: To identify and analyse prevalence and risk factors of metabolic syndrome among healthcare professionals in Muvattupuzha municipality of Kerala.

METHODOLOGY: The study was a cross sectional (prospective, observational) study carried out on healthcare professionals. WHO STEPS instrument was used for risk factor assessment (behavioural, physical and biochemical risk factors) of metabolic syndrome.

RESULTS: A total of 211 healthcare professionals were included in the study and the prevalence of metabolic syndrome was found to be 13.27% with mean age of 34.2±9.5 years. Reduced physical activity (81.5%) and inadequate consumption of fruits (42%) and vegetables (16.5%) were the more prevalent behavioral pattern shown by the participants. 36.96% of them had generalized obesity with mean of 26.95±2.63 and 67.29% had abdominal obesity. Combined obesity of both generalized and abdominal obesity was shown by 33.65% of participants. Elevated fasting blood glucose and triglyceride were reported by 20.38% and 17.53% respectively. Statistically significant (P<0.001) difference in number of risk factors between males and females.

CONCLUSION: Early detection by assessing the risk factors is important in prevention of metabolic syndrome to chronic diseases.

Abstract no:40

A Cross Sectional Study on Evaluation of Prescribing Practices and Drug-Related Problems in Chronic Kidney Disease Patients

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AIM: The aim of the study is to identify prescribing pattern and various Drug related problems (DRPs) in chronic kidney disease patients associated with the drug therapy.
METHODOLOGY: A prospective observational study was performed in 160 patients diagnosed with all the stages of CKD. The prescribing pattern and DRP's were evaluated, reported and categorized on basis of Pharmaceutical Care Network Europe (PCNE) classification V 5.0. The predictors of DRP's were determined using binary logistic regression analysis and chi-square test was used to analyse the association between categorical variables.
RESULTS: The study population mean age was 50.08 ± 15.32 years predominated by males (71%). The mean number of drugs per prescription were found to be 9.16 ± 3.01. The most commonly prescribed drug category was anti-hypertensives and drugs were diuretics. Totally 337 DRP's were identified of which most common DRP was drug interactions (60%), followed by frequency errors (11.6%). The predictors of DRP's were analyzed using logistic regression analysis which showed alcoholism (odds ratio 1.5), polypharmacy (odds ratio 1.2), comorbidities more than three (odds ratio 2.09) and patients using anti-hypertensives more than two (odds ratio 1.9) are at higher risk of developing DRP's.
CONCLUSION: DRP's increase the risk of disease progression and hospital stay. So, identifying and resolving the DRP's will result in better patient care. Early identification of the above-mentioned predictors and their management could reduce DRP's.

Keywords: Chronic Kidney Disease, Prescribing Pattern, Drug Related Problems, Comorbidities, Polypharmacy

Abstract no:41

A Retrospective Study on Antibiotic Sensitivity and Resistance Pattern of E. Coli

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INTRODUCTION-Antibiotic resistance has become a major worldwide problem. Infections caused by resistant bacteria leads to increased morbidity and mortality than those by susceptible pathogens.
OBJECTIVE-To study the antibiotic sensitivity and resistance pattern of E. Coli.
METHODOLOGY
Study site: Chalakudy a town located in Thrissur district of Kerala.
Study type: Retrospective observational study
Study population: Inclusion of all the culture positive cases with E. Coli as isolated organism.
RESULT
A total of 1000 specimens collected, and the patients were classified into 5 groups based on their age. 29.7% was found to be male and 70.3% was found to be female. Out of 297 samples from males the percentage of type of samples collected are urine (35.02), sputum (46.46), pus (5.05), suction tip (4.04), throat swab (9.43). Similarly, in females different types of sample collected are urine (81.08), sputum (12.94), pus (3.41), suction tip (0.85), throat swab (1.28), breast milk (0.43). 57% of the sample collected was E. Coli positive. Out of 570 samples, 502 are sensitive to amikacin and 68 are resistant and 30 samples are sensitive to cephalexin and 540 were resistant. Similarly, some of the major antibiotics was checked for the sensitivity and resistance pattern.
CONCLUSION-The study indicates the alarming increase of resistant E. Coli bacteria which has to be considered as a serious threat also indicating the necessity to provide a prescribing guideline based on the sensitivity pattern.

Abstract no:42

Antihypertensive Prescribing Patterns in Patients with Heart Failure

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INTRODUCTION- Heart failure (HF) is an inherited or acquired clinical syndrome where the heart muscles weaken, decreasing blood pumping ability and leading to oxygen insufficiency. Hypertension is its most common comorbidity necessitating concomitant usage of antihypertensive drugs.
OBJECTIVE- A prospective observational study was conducted to determine the prescribing pattern of antihypertensive agents in patients with heart failure.
METHODOLOGY- Patients with heart failure admitted in the cardiology wards of M S Ramaiah Memorial Hospital from January 2017 to June 2017 who satisfied the criteria were included in the study. Prescriptions, case notes, medication charts, nursing reports and other relevant documents were the data sources.
RESULTS- 151 heart failure patients were enrolled (92(61%) male and 59(39%) female). Acute decompensated heart failure type had the highest frequency (n= 82, 54.3%). Polypharmacy was observed in a majority of cases (41% with >11 medications). Hypertension was observed in n= 85 (56.3%) and diuretics were the most common antihypertensive agents (n= 129, 85.43%). Diuretics were the sole antihypertensive agents in preserved or reduced ejection fraction, acute and refractory heart failures but were avoided in advanced heart failures. The most popular choice of diuretic was Furosemide (n=114, 75.5%).
CONCLUSION- Appropriate choice of antihypertensive agent help in achievement of aggressive blood pressure goals that seem likely to confer additional risk reduction in patients with HF. Reduction of polypharmacy seems to be a constant struggle and need of the hour in all the settings.

Keywords- Heart failure, Diuretics, Antihypertensive

Abstract no:43

Frequency and Antibiotic Sensitivity Patterns of Uropathogens In General Practice: An Observational Study

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OBJECTIVES: In addition to clinical status of patients, decision of antibacterial therapy should be based on accurate, updated knowledge of major pathogens in patients' age groups as well as antimicrobial susceptibility in the area of practice. This study was conducted to assess various pathogens causing urinary infections and their antibiotic susceptibility and resistivity patterns.

METHODOLOGY: This prospective observational study was conducted in all inpatients diagnosed with UTI above 18 years of age in General Medicine department. Details of urine sample such as strain of organism, culture yield and antibiotic sensitivity profile were identified from patients' culture sensitivity (CST) reports. Antibiotics were classified as empirical and definite therapy based on whether antibiotic was administered before culture and CST reports.

RESULTS: A total of 204 patients were included wherein CST was ordered for 196 (96%) patients. Of these, 59 (30.1%) showed significant growth amongst which majority were Gram negative 51 (86.4%). E. coli 33 (55.9%), being the most prevalent organism, showed highest susceptibility to Amikacin 93.9%, Nitrofurantoin 78.7% and Imipenem 75.5%. K. pneumonia showed 100% resistance to Ampicillin, Amoxicillin/Clavulanic acid, Ciprofloxacin and Ceftriaxone. Of 318 antibiotics prescribed, 256 (80.5%) received empirical and 62 (19.5%) definite therapies, respectively. Whilst Ceftriaxone 123 (48.1%) were mostly used empirically, Meropenem 14 was mostly used as definite therapy.

CONCLUSION: Knowledge and identification of the antibiotic susceptibility of causative organisms aids in deciding an appropriate treatment regimen for an individual patient. Usage of high end antibiotics as empirical treatment increases the chances of development of resistance.

Abstract no:44

A Clinical Study of Impact of Anaemia in Pregnancy on Maternal and Neonatal Outcome

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AIM: To study effect of anemia in obstetrics patients during antepartum, intrapartum and postpartum and to find the incidence of maternal and neonatal morbidity and mortality in those patients.
METHOD: A Prospective clinical study was conducted on patients receiving obstetric care at Basaveshwara Medical College & Hospital from July 2016 to July 2018. Pregnant women with Hb less than 8g were included in the study to determine the outcome of pregnancy in severe anemia and determine the causes of anemia. Acute cases of obstetrical hemorrhages as in antepartum and postpartum hemorrhages and all medical and surgical high-risk factors except anemia, were excluded from the study.
RESULT: A total of 200 pregnant anemic patients with hemoglobin less than 8g/dl were included in the study. The patients were divided into two groups based on hemoglobin concentration at first presentation. Patients with hemoglobin level less than 5g/dl were included in group A (N=44, 22%), and rest of the patients were included in group B (N=156, 78%). Most commonly observed complications in the study were preeclampsia and eclampsia (46 cases), preterm labour (46 cases) and IUGR (30 cases). In both group of patients the commonest cause of anemia in pregnancy was iron deficiency. The greater the severity of anemia in pregnancy, greater was the risk of preeclampsia, preterm delivery, low birth weight and stillbirth.
CONCLUSION: This study reveals that severe anemia which is commonly observed in the pregnancy in our country, gives rise to maternal and perinatal morbidities and mortalities.

Keywords: Anemia, Hemoglobin, Perinatal outcome.

Abstract no:45

Comparitive Assessment of Toxicity Of 3-Bromopyruvate And Combination Of 3-Bromopyruvate With Dimethylfumerate In Normal Mice

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Cancer is among the leading causes of death worldwide. Cancer can affect almost any part of the body and requires specific management strategies. New treatment options are available and the surge of innovation is expected to continue due to a robust pipeline of drugs in clinical development. In the present study, assessment of sub- chronic & chronic toxicity of 3-Bromopyruvate and combination of Dimethyl fumerate with 3- Bromopyruvate was accomplished with two groups each for 90 and180 days treatment. The assessment of toxicity of study drug was established in 4 important phases, Gross animal behavior, Hematology, Clinical biochemistry and histopathological study. 3-Bromopyruvate enhanced the body weight in males after 30 days of treatment. Treatment with combination of 3-Bromopyruvate and Dimethyl fumerate showed decrease in body weight and levels of glucose, lymphocyte, platelet count in both sex, there is an increase in levels of WBC, elevation in the levels of biomarkers- SGPT, SGOT, alkaline phosphatase Creatinine and urea indicating hepatic damage and biliary obstruction. These results are in concurrent with histopathological examination of liver tissues when compared to the control group. Due to high mortality animals did not survive for 180 days. Therefore, diverse aspects of specific organ toxicities can be established. This would be very beneficial in aiding the clinicians to establish a possible pathway for further treatment and to avert death of an individual.

Abstract no:46

A Study on The Influence of Carbamazepine and Posaconazole On the Pharmacokinetics of Repaglinide In Rabbit

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In the present study interaction of Repaglinide, Posaconazole and Carbamazepine were studied. Repaglinide metabolize mainly by CYP3A4.Posaconazole and carbamazepine are also metabolized by the CYP3A4 and has the capacity to inhibit and induce CYP3A4 respectively which is the principal enzyme metabolizing Repaglinide. Hence there is a possibility of pharmacokinetic type of interactions when these drugs are given in combination. Maintenance of blood glucose levels in diabetic patients is very essential and alterations in pharmacokinetic of oral anti-diabetic agent may remit severe hypoglycemia / reduced potency. The experiment was conducted using four groups of healthy rabbits (n=5), Group I, II were treated with vehicle gum acacia, Repaglinide (70µg/1.5kg b.w), Group III,IV was treated higher dose of Posaconazole (56mg/200g b.w),Carbamazepine (28mg/105kg b.w) respectively for 7days, the 8th day after one hour treatment with Posaconazole, carbamazepine the animals were treated with Repaglinide (70µg/1.5kg b.w).Blood samples were collected by marginal ear vein in rabbits at 0, 1, 2, 4, 6, 8, 12, 18, and 24hour analyses of drug pharmacokinetics and plasma concentration was done using RP-HPLC. From the study it was indicated that Isoenzymes of CYP-450 systems are sensitive to Posaconazole and thereby it affects hypoglycemia induced by Repaglinide. Carbamazepine shown to increase the dose of Repaglinide during concomitant use. Therefore therapeutic drug monitoring is needed so as to readjust the dose and frequency of administered Repaglinide when they are used with Posaconazole and Carbamazepine.

Keywords**:** RP-HPLC, Repaglinide, Posaconazole, Carbamazepine, Drug-Drug Interaction, Hypoglycemia

Abstract no:47

Study on The Influence of Rifampicin and Ranitidine On The Pharmacokinetics of Vildagliptin In Rabbits

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The main objective of this study was to investigate the influence of ranitidine and rifampicin on the pharmacokinetics of vildagliptin in rabbits using RP-HPLC. Identifying drug-drug interaction is important for deciding the dosage regimen and for choosing the right combination of drugs. Rifampicin and ranitidine are common drugs which are used widely and for a prolonged duration in various scenarios. Vildagliptin is the drug of choice used in the treatment of Diabetes. It is evident that Rifampicin is a powerful inducer of CYP450 class enzymes. Ranitidine is a CYP3A4 enzyme inhibitor and vildagliptin is metabolized by CYP3A4 a subclass of CYP450. RP-HPLC methods were developed and validated according to ICH guidelines for the simultaneous estimation of vildagliptin and rifampicin, vildagliptin and ranitidine. After pretreatment with respective drugs for 8 days, pharmacokinetics of vildagliptin was studied on the 9 th day in rabbits by withdrawing blood samples at various time intervals and subjecting the plasma to HPLC. The pharmacokinetic data revealed that pretreatment with rifampicin significantly decreased the plasma drug concentration, plasma half-life, area under the curve, duration of action and mean residence time of vildagliptin. Whereas, pretreatment with ranitidine had no significant effect, hence the dose and frequency of vildagliptin has to be readjusted when it is used concomitantly with rifampicin.

Keywords: Vildagliptin, Ranitidine, Rifampicin, RP-HPLC, Drug-drug interaction, Pharmacokinetics, AUC.