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List of National/International papers published-Academic year 2018-2019

S NO	Title of Paper	Name of Author	Department of Teacher	Name of Journal	Year of Publication	ISSN /ISBN number
1.	Preliminary Phytochemical And Physiochemical Investigation Of Woodfordia Fruticosa (Linn) Kurz Root	T. Venkatachalam	Pharmaceutical chemistry	International Journal Of Green Pharmacy	2018-2019	0973-8258,1998-4103
2.	Evaluation Ofanti Ulcer Activityof Stachytrapheta Jamaicensis Leaf Extract	V.Suresh	Pharmacology	International Journal Of Pharmacology And Clinical Research (Ijpcr)	2018-2019	2521-2206
3.	Evaluation Of Antiurolithic Activity Of Aqueous Extracts Of Syzygium Cumini Bark	V.Suresh	Pharmacology	International Journal Of Pharmacology And Clinical Research (IJPCR)	2018-2019	2521-2206
4.	Evaluation Of Diuretic Activity Of Samanea Saman(Jacq)Merr Bark In Albino Rats.	V.Suresh	Pharmacology	Journal Of Global Trends In Pharmaceutical Sciences	2018-2019	2230-7346
5.	To Assess Self-Reported Adherence,	KC.Arul Prakasam	Pharmacy Practice	Journal Of Pharmaceutical Sciences And	2018-2019	0975-1459

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	Management Behavior, And Barriers To Care After Hospital Visit And Study The Impact Of Patient Education On Children With Asthma			Research		
6.	Maser The Drug Adherence, Factor Affecting Adherence And Management Of Acute Asthma Children'S In Tamilnadu	KC.Arul Prakasam	Pharmacy Practice	International Journal Of Current Advanced Research	2018-2019	2319-6475
7.	Assessment Of Gestational Diabetes Mellitus Related Stress Using A Specific Scale Administered As An Online Mobile Application	A.Srinivasan	Pharmacy Practice	International Journal Of Pharmacy And Pharmaceutical Sciences	2018-2019	2656-0097
8.	Antidiabetic Activity Of Ethanolic Extract Of Baringtonia Acutangula	Dr.A.Chitra	Pharmaceutical chemistry	International Journal Of Research In Pharmacology & Pharmacotherapeutics	2018-2019	2278-2656
9.	Design , Development And Evaluation Of Selected Antifungal	S. Chandra	Pharmaceutics	World Journal Of Pharmaceutical Research	2018-2019	2277-7105

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10.	A Statistical Study On The Formulation Development Of Sustain Release Tablets For Valsartan Sodium	T. Venkatachalam	Pharmaceutical chemistry	Moj Drug Design Development & Therapy	2018-2019	2575-9094
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12.	Pharmacological Models To Appraisement Of Antianxiety Activity In Experimental Animals	T. Venkatachalam	Pharmaceutical chemistry	International Journal Of Green Pharmacy	2018-2019	0973-8258
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24.	Formulation And Evaluation Of Oral Disintegrating Tablets And Oral Disintegrating Films Of Lisinopril	S. Chandra	Pharmaceutics	International Journal Of Advanced Pharmaceutical Science	2018-2019	2456-8147
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26.	Formulation And Evaluation Of Ofloxacin Microsphere By Using Ethyl Cellulose As A Polymer At Different Ratio	S. Chandra	Pharmaceutics	International Journal Of Advanced Pharmaceutical Science	2018-2019	2456-8147
27.	Formulation And Evaluation Of Diclofenac Sodium Transdermal Patches	S. Chandra	Pharmaceutics	World Journal Of Pharmaceutical Research	2018-2019	2277-7105

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ORIGINAL ARTICLE

Preliminary phytochemical and physicochemical investigation of *Woodfordia fruticosa* (linn) kurz root

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Abstract

Introduction: The objective is to investigate the preliminary phytochemical and physicochemical properties of *Woodfordia fruticosa* Kurz roots. *W. fruticosa*, commonly called as Dhavi, is a large beautiful tree, about 10 ft long, belongs to the family Lythraceae. These studies were performed because, before any experimental and clinical trial, phytoconstituents present in the plant should be known. **Material and Methods:** The root of *W. Fruticosa* contains protein, fixed oil, glycoside, carbohydrate, terpenoid, steroid, tannin, and saponin. The physiochemical analysis of *W. fruticosa*root was also performed which includes ash value, loss on drying and extractive value determination. **Result and Discussion:** Total ash value, acid-insoluble ash, and water-soluble ash value were 6.5 % w/w, 2 % w/w, and 0.5 % w/w. Loss on drying was 4.4 % w/w, and extractive value was 3.4 % w/v in water and 6.4 % w/v in ethanol. **Conclusion:** This study revealed that these parameters will be useful in the identification and quality control of the genuine plant material or crude drug.

Key words: Glycosides, Physicochemical, Phytochemical, *Woodfordia fruticosa*

INTRODUCTION

Many researchers and scientist are on the verge of discovering of natural products exploiting natural products are the most consistently successful source of drug leads. More than half of drug molecules are natural derived compounds. It provides more structural and therapeutically diversity than synthetic products. There are so many natural products which have to be discovered, but the main challenge is to right access on this chemical diversity which is useful in severe ailments such as cancer and diabetes heart diseases. For the treatment of various types of disease, medicinal plants have been used from the primitive times. Plants contain different types of an active constituent that can be used for the therapeutic purpose or as precursors for pharmaceutical synthesis. During recent times, herbal therapies have become more popular due to low cost more effectiveness, easy availability, and fewer side effects.[1] As a result, global market demand for herbs and their products has increased tremendously in recent years. Therefore, quality control of herbal products for the purpose of efficacy and safety is essential.[2] Authentication and development of standardization parameter are essential for any crude drug and their formulation. The World Health Organization (WHO) has prescribed a number of standardization parameter for the quality control of medicinal plant materials. Quality control is determined on the basis of identity, purity, content, chemical, physical, and/or biological properties, as well as by manufacturing process.[3] Thus, in this research work attempt has been made for standardization of *Woodfordia fruticosa* root by investigating its physicochemical and qualitative phytochemical properties.

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Research article

Clinical research

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Evaluation of anti-ulcer activity of Stachytrapheta jamaicensis leaf extract

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ABSTRACT

Many herbal remedies have been employed in various medical systems for treatment and management of different diseases. The plant *Stachytrapheta jamaicensis*. has been used in different system of traditional medication for the treatment of diseases and ailments of human beings. The review reveals that wide ranges of phytochemical constituents have been isolated from the plant like flavanoids, tannins, phytosterols, phenol, glycosides, fatty acids, galacto-glycerolipid and volatile oil. The leaves contain flavonoids. It is rich source of essential fatty acids like palmitic acid, oleic, linoleic, linolenic and stearic acids. It has been reported that the plant contains anti-inflammatory, anxiolytic, anticonvulsant, antifungal, antinociceptive, anticancer, antidiabetic, hepatoprotective, hypolipedemic, abortificient, antimicrobial and wound healing properties.

INTRODUCTION

Herbal cure for gastrointestinal diseases involves use of herbal supplements for relief of gastrointestinal symptoms and to improve physiologic function of the gastrointestinal tract (GIT).The gastrointestinal disorders include a wide spectrum of disorders that range in importance from simple discomfort to life-threatening disease and include peptic ulcer disease (PUD), dyspepsia, gastro esophageal reflux disease (GERD), constipation, diarrhoea, upper gastrointestinal bleeding, etc. It is noted that most of the upper GI disorders are acid related diseases in which gastric acid play an important role in their development, progression and treatment. The relationship between anxiety and peptic ulcer disease (PUD) has received significant consideration in clinical and research settings over the past few decades. Earlier data from clinical and community-based study have shown that PUDoccurs more frequently than would be expected among persons with anxiety and depressive disorders and have provided evidence of a relationship between anxiety and increased rates of lower gastrointestinal problems though the mechanism of these relations remains unknown .The present study is initiated to evaluate anti-ulcer activity studies of in experimental animals [1-5].

Stachytrapheta jamaicensis is an erect and branched half-woody plant, with stem slightly angled. The leaves are elliptic to oblong-ovate and 2 to 10cm long. The leaf tips are pointed with toothed margins. The leaf base is decurrent on the petiole [6-10].

The spikes are terminal, rather slender, 10-30cm long, 3-4mm thick, green and continuous. The calyx is small, oblique and 4-toothed. The corolla is deep-blue or blue-purple, 1cm long. The fruit is enclosed in the calyx and oppressed to and somewhat sunk in the rachis which is smooth, oblong and about 4mm long [11-15].

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Research article

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Evaluation of antiurolithic activity of aqueous extracts of syzygium cumini bark

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ABSTRACT

The bark of *Syzygium cumini* bark are beneficial in treating the various other ailments, which is also accountable for its action on renal calculi preferably at this juncture. Cold maceration technique was used for the extraction of coarse powder of the plant bark and a total of 200g of *Syzygium cumini* was used to make a coarse powder. The Adult Wistar rats *S*wiss mice weighing between (20-30 g) were used to calculate LD_{50}. In the present study, chronic induction of EG (0.75% v/v) to male wistar rats resulted in significant ($P<0.001$) increase in urinary excretion of calcium and phosphorous. Whereas the cystone-treated group III animals were shown significant reduction in calcium ($P<0.0001$) and phosphate ($P<0.001$) levels. Similarly treatment with plant extract significantly lowered the elevated levels of calcium ($P<0.0001$) and phosphate ($P<0.0001$) in 400 mg/kg as compared to EG induced group II animals. In conclusion, the aqueous extract of *Syzygium cumini* bark has both preventive as well as curative property in urolithiasis of rats.

Keywords: *Syzygium cumin,* Anti urolithic activity, Urolithiasis, Cold maceration technique.

INTRODUCTION

Urolithiasis and its Significance

Urolithiasis is defined as the formation of sediment anywhere within the urinary tract and consisting of one or more of the poorly soluble crystalloids of urine. It is the 3rd most common disorder of the urinary tract. Renal calculi are characterized clinically by colicky pain (renal colic) as they pass down along the ureter and manifest by hematuria. Major risk factors responsible for the nephrolithiasis are inadequate urinary drainage, microbial infections, diet with excess oxalates and calcium, vitamin abnormalities i.e; deficiency of Vitamin-A, excess of vitamin D, metabolic diseases like hyperparathyroidism, cystinuria, gout, intestinal dysfunction and environmental factors related to regions with hot and dry climatic conditions [1-6].

The present medical management of urinary stone includes lithotripsy and surgical procedures which are prohibitively expensive for the common man and with these procedures recurrence is quite common and the patient has to be examined through careful follow up for several years. Various factors such as size of calculi, severity of symptoms, and degree of obstruction, kidney function, location of the stone and the presence or absence of associated infection, influence the choice of one type of intervention over the other.

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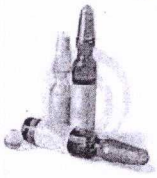

Research Article

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EVALUATION OF DIURETIC ACTIVITY OF *SAMANEA SAMAN* (Jacq) Merr BARK IN ALBINO RATS

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ABSTRACT:

The diuretic potential of methanol extract of the bark of *Samanea saman(Jacq)* Merr was assessed in albino rats using *in-vivo* Lipschitz test model. The volumes of urine, urinary concentration of sodium, potassium and chloride ions were the parameters of the study. Furosemide was used as standard. The results indicate that methanol extract at a concentration of 200 mg/kg and 400 mg/kg body weight shows an increase in the urine volume and electrolyte excretion when compared to control. Thus the methanol extract of the bark of *Samanea saman(Jacq)* Merr showed a significant diuretic activity. From the present study it may be concluded that the phytoconstituents present in methanol extract may be responsible for diuretic activity.

KEY WORDS: Diuretic, Lipschitz test, electrolyte excretion, *Samanea saman (Jacq)* Merr.

INTRODUCTION:

Samanea saman(Jacq) Merr is a large umbraculiform tree growing over 20 meters height with a stout trunk about 1.5 m in diameter and large spreading canopy providing shade. Branches are widespread more or less deciduous. Bark is rough and furrowed. It is valuable as a shade tree in pastures, stimulating grass growth. The leaves fold together on the approach of rain hence named as RAIN TREE. Saponin-like alkaloid pithecolobin has been isolated from the bark and the seed. Alkaloids are said to be abundant in the bark, stems, leaves, and seeds. Leaves and stems have saponin and tannin; gum is present in the trunk. Additionally steroids, cardiac glycosides, terpenoids are also present in the plant. The plant is used in acute bacillary dysentery, enteritis, diarrhoea, colds, sore throat and headache. A decoction of the inner bark or fresh cambium and leaves are used to treat anaphylactic dermatitis, eczema, skin pruritus. Latex used as gum arabic for gluing. In Venezuela, rain tree is a traditional remedy for colds, diarrhea, headache, intestinal ailments and stomach ache.

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To Assess Self-reported Adherence, Management Behavior, and Barriers to Care after Hospital Visit and Study the Impact of Patient Education on Children with Asthma

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Abstract:

The inability to adhere to a prescribed therapeutic program for the treatment of a chronic disease may be responsible in part for continued disease activity. Adherence was one of the key areas of interest for the Asthma Study. The focus of this study was to identify those issues reported by families that could adversely affect their adherence to an asthma care program. To assess the Self-reported Adherence, Management Behaviours, and Barriers and impact of patient education. Patients presenting during an acute attack of asthma at were recruited for this study. The medical record of the encounter was abstracted and compared with information that was obtained during a baseline interview 3 to 5 weeks later. There were 986 children 4 to 15 years of age living in city census tracts in the study. The parental report of medications prescribed and the information on the abstracted report agreed 95.15% of the time for the β-Agonists, 86.24% for steroids, and 7.71% for cromolyn. Medications were forgotten some of the time by 45.2% of the children, and 52.8% tried to get out of taking medicine. Appointments for follow-up care were kept by 69% of those given an appointment, by an estimated 60.0% of those who were told specifically to call for an appointment. Only one third of parents report that they were able to keep the child away from known asthma triggers nearly all of the time. After the follow up the significant changes are seen. Adherence to an asthma-management program involves a number of areas: medication, appointment- keeping, prevention, and applying an emergency plan of action. Barriers to adherence may exist in one or all four of these areas, leading to ineffective control of asthma. The patient education to improving the patient-physician partnership and also improve adherence.

Keywords: Adherence, Asthma, Pediatric, Communication, management, patient education

INTRODUCTION:

Asthma morbidity and mortality have asthma who live within an city environment.[1-5] The specific reason(s) for this situation is unknown. To better understand and address this issue, The tasks of this effort increased disproportionally among children with are associated with asthma morbidity in children, and to address these factors. Non-adherence to a prescribed to asthma morbidity and I) to determine what factors 2) to develop an intervention therapeutic program is one of the purported factors contributing mortality in population's[4-6] and is likely to contribute to asthma morbidity in children with asthma. Therefore, one of the key areas of investigation in the compliance or adherence to an asthma management plan by patients and families. It sought not only to but also to identify what factors affected adherence. The successful management of any disease state must include the essential component of adherence to the therapeutic program. The adherence process puts more burden on the clinician to encourage behaviours that increase compliance and enhance the therapeutic effect of the treatment program. The nature of the disease requires a therapeutic program that involves a number of potentially difficult issues. Patients with asthma need to know how to prevent asthma attacks and what to do when an attack occurs, and have an understanding of the medications used for asthma. They also need interval visits to their health care providers the disease and to reinforce all these concepts of asthma management. The adherence to a medical program has a number of problems. Current trends in drug therapy involve agents that are not easily measured. Newer electronic devices tend to be expensive and untested in a number of populations. However, one commonly used measure of adherence, self-reported adherence, is not affected by the type of medication used, simple to administer, relatively non-invasive, inexpensive, and well established. The self-report of e may have problems with validity. This problem has been described regarding well established self-report instruments used to measure adherence.[4] Speculations on the reasons for adherence problems have included major areas such as 1) nature of the illness itself, 2) physician therapeutic settings and the continuity of care, 4) complexity of the s of the patient. Reasons that adults have given for not prescribed treatment program include forgetting (48%), inconvenience (11%), side effects (6%), and medication taste (1%).[9] Other reasons given for non adherence have included fear of dependency and depression.[4] Similar issues may pose barriers to adherence for children with asthma.

METHODS:

The study focused on four broad areas allergens and airway irritants in the home environment, access to medical care, adherence and psychosocial factors that were seen as potential contributors to asthma morbidity. Participants were interviewed about these topics during a baseline interview and contacted regarding asthmas symptoms and health care baseline interview. To obtain a sample with a broad range of characteristics that might be

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Research Article

MASER THE DRUG ADHERENCE, FACTOR AFFECTING ADHERENCE AND MANAGEMENT OF ACUTE ASTHMA CHILDREN'S IN TAMILNADU

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Bronchial asthma, adherence, health education, non-adherence, self-action plan

ABSTRACT

Background: Considering the prevalence and associated burden of disease due to bronchial asthma, it is mandatory to obtain an optimal control of the disease and to improve outcomes for these patients. But it has been observed that there is very poor adherence to the inhalational therapy which leads to the suboptimal control of the disease.
Objectives: To study the adherence for aerosol therapy in bronchial asthma patients and to assess the impact of health education and self action plan in improving the adherence to the therapy.
Method: A prospective study was done in a total of 986 bronchial asthma patients over a period of 2 years. Once included in the study, the patients were followed up for a total of 12 weeks for calculation of non-adherence to the aerosol therapy. In non-adherent patients, we employed various health education strategies to improve the adherence in these cases.
Results: A total of 986 patients of bronchial asthma who were started on therapy over duration of 6 months were included in the study. At the end of 12 weeks, it was observed that, only 108 patients (10.95) had regular adherence and 878 patients (89.05%) were non adherence to the therapy as prescribed for bronchial asthma. Factors that were associated with poor adherence were: Lower educational level status, poor socioeconomic status, cumber some regimens, dislike of medication, Fears about side effects, beliefs, changing in regimen, and patient's ill attitudes toward health. After employing the various strategies for improving the adherence in these patients, the adherence increased in patients (61.32%) among the earlier defaulted patients, while the remaining 188 patients (38.68%) were found to be non-adherence even after various educational techniques.
Conclusion: No adherence in asthma management is a fact of life and no single adherence improving strategy probably will be as effective as a good physician and patient relationship. Optimal self-management allowing for optimization of asthma control by adjustment of medications may be conducted by either self-adjustment with the aid of a written action plan or by regular medical review. Individualized written action plans based on peak expiratory flow are equivalent to action plans based on symptoms.

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INTRODUCTION

Bronchial asthma is a major public health problem affecting a large number of individuals of all ages. Globally, 100-150 million people suffer from asthma. India has 20-28 million asthmatics and the prevalence amongst children (5-11 years) is 10-15%.Being a chronic medical condition, management of bronchial asthma requires continuous medical care. Modern management of bronchial asthma requires prolonged medications. A key issue in proper management of bronchial asthma is adherence to treatment. Poor adherence to prescribed therapy increases morbidity and mortality and it is increasingly being documented that long-termadherence or adherence to prescribed therapy is difficult to attain (Chochrane, 1996).

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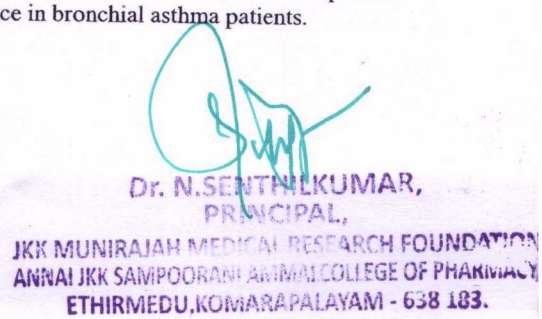
Studies have reported that 50% of patients with a chronic disease do not use their medication at all or do not use it as prescribed (Antonello, 2009). Important reason for poor adherence is that patients with a chronic disease do not have a satisfactory understanding of their condition. The economic burden of bronchial asthma to the society is well documented in industrialized countries (Barnes *et al*., 1996), and is a great burden to the health services. Poor asthma control is responsible for a large proportion of the total cost of the disease, for the patient as well as to the society, and thus responsible for the both direct and indirect cost of therapy. The present study was undertaken to study the factors that influence patient's adherence with prescribed medications, and to assess the impact of health education and self-action plan in improving the adherence in bronchial asthma patients.



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Original Article

ASSESSMENT OF GESTATIONAL DIABETES MELLITUS RELATED STRESS USING A SPECIFIC SCALE ADMINISTERED AS AN ONLINE MOBILE APPLICATION

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ABSTRACT

Objective: Aim of the study was to assess the Gestational Diabetes Mellitus (GDM) related stress among pregnant women using an online mobile application based specific stress scale for GDM.

Methods: This was a prospective observational study. All GDM patients who have used the Gestational Diabetes Stress Scale (GDSS)-mobile application within the study period were included (176 patients). Their total and subscale stress scores were analyzed.

Results: This study found that 52.84% of the total population needed clinical attention for GDM related stress. The subscale scores revealed that 65.91% of the population needed clinical attention for emotional burden, 15.34% of the population needed clinical attention for medication-related stress, 69.89% of the population needed clinical attention for social or economical stress and 36.36% of the population needed clinical attention for health care set up related stress.

Conclusion: Based upon this study we conclude that GDSS is a good invention. There existed a gap in measuring GDM related stress in pregnant women and GDSS is a solution for the same.

Keywords: Gestational diabetes mellitus, Gestational diabetes-related stress, Gestational diabetes stress scale

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INTRODUCTION

Gestational Diabetes Mellitus (GDM) is a condition of any degree of glucose intolerance with onset or first detected during pregnancy. Prevalence of GDM increasing worldwide (21 million new cases per year) [1]. According to International diabetes federation, 16% of the children born alive in 2013 had complications due to hyperglycemia. Goals for Glycemic Control in Pregnancy are like, Fasting 60-90 mg/dl, Pre meal<100 mg/dl, 1 hr postprandial<140 mg/dl, 2 h postprandial<120 mg/dl, Bedtime<120 mg/dl, and 2:00-6:00 A. M. 60-90 mg/dl [2]. GDM can cause complications in both mother and foetus. Major Fetal complications are Macrosomia, spontaneous abortion, congenital malformation and intrauterine death and maternal complications and risk of diabetes recurrence in future pregnancies, the future possibility of diabetes mellitus, polyhydramnios, pregnancy toxemia, urinary tract infection, candidiasis, higher incidence of premature childbirth and caesarean delivery[3]. Studies found that prevalence of diabetes is high among females [4] and GDM can further increase the risk for the same.

GDM will increase emotional disequilibrium during pregnancy. It is well documented that pregnancy is linked with unique psychological stress and diabetes also linked with significant distress. In addition to the stress of pregnancy, GDM is also a stress factor [5-7]. Women with GDM also experience shock, fear and stress [8, 9]. Maternal stress during pregnancy can cause emotional or cognitive problems in childlike attention-deficit/hyperactivity, anxiety and language delay [10].

Stress can affect GDM control by influencing proper diet compliance, medication adherence or glucose monitoring. To prepare a suitable plan for GDM related stress proper identification of the stress level along with the possible sources for the same is needed. Manikandan *et al.* in Tamilnadu concluded from their study that providing proper patient counseling services and creating awareness regarding the condition can improve patient's medication adherence [11].

Primary objective of the study was to assess the GDM related stress in pregnant women through the administration of an online mobile application based specific scale for gestational diabetes mellitus.

MATERIALS AND METHODS

Study Design: This was a prospective observational study.

Study duration: Six months

Study population: 176 pregnant women with GDM

Data collection: Data collection was done through GDSS mobile application.

Study criteria

All pregnant women with GDM irrespective of gestational weeks, naturally pregnant women and *In vitro* fertilization (IVF) pregnant women with GDM were included in the study. Non-consenters and incomplete data entries were excluded from the study.

Materials used

A mobile application called 'GESTATIONAL DIABETES STRESS SCALE'. It is available in Google play store (https://play.google.com/store/apps/details?id=com.byzero.gdss)

RESULTS AND DISCUSSION

Age wise distribution

Among the total study population majority of the patients were from 24 to 29.12 y which is 44.88% of the population, followed by 30 to 34.12years (25%), 18 to 23.12years (16.48) and the least were from the age group of greater than or equal to 30 y (13.67%).

Educational status

Most of the patients in the study population were graduate which is 43.75% of the study population followed by postgraduate (21.59%), metric (18.18%), higher secondary (12.05%) and less number of the population was illiterate (3.98%).

Occupation status

Among the study population, 51.13% were homemakers, 14.78% were self-employees, 5.68% were IT professional, 4.54% were from

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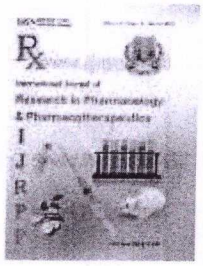

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Research article | Open Access

Antidiabetic activity of ethanolic leaf extract of *barringtonia acutangula*

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ABSTRACT

Antidiabetic activity of ethanolic leaf extract of *barringtonia acutangula* used in folkloric management of diabetes. The ethanolic leaf extract of *barringtonia acutangula* was evaluated by antidiabetic activity in alloxan. Animals were allowed to fast for 24 hrs. And were injected with freshly prepared Alloxan monohydrate 37mg/ml is prepared and administered within five minutes at a dose of 150mg/kg body weight intra peritonially. After 48 hours of administration the rat with moderate diabetes having glycosuria & hyperglycemia (i.e. blood glucose is more then 300mg/ml) The animals were maintained in the diabetic state over a period of 21 days. Serum glucose was measured by Glucometer Accu check. Rats showing fasting serum glucose levels (>250 mg/dl) were selected for the study. The antidiabetic activity of the ethanolic leaf extract of Barringtonia Acutangula observed. The Barringtonia Acutangula leaf extract present in the compound was identified as may be Lupeol Acetate.

Keywords: Antidiabetic, Diabetes, Barringtonia Acutangula, hyperglycemia, Lupeol acetate

INTRODUCTION

Diabetes mellitus (DM), also known as simply diabetes, is a group of metabolic diseases in which there are high blood sugar levels over a prolonged period. Untreated, diabetes can cause many complications.[1] Acute complications include diabetic keto acidosis and nonketotic hyperosmolar coma. Serious long-term complications include heart disease, stroke, kidney failure, foot ulcers and damage to the eyes.[1] Diabetes is due to either the pancreas not producing enough insulin, or the cells of the body not responding properly to the insulin produced. [2]

Globally, as of 2013, an estimated 382 million people have diabetes worldwide, with type 2 diabetes making up about 90% of the cases.[3] [4]This is equal to 8.3% of the adults population,[4] with equal rates in both women and men. Worldwide in 2012 and 2013 diabetes resulted in 1.5 to 5.1 million deaths per year, making it the 8th leading cause of death. [5] The number of people with diabetes is expected to rise to 592 million by 2035.[6] The economic costs of diabetes globally was estimated in 2013 at $548 billion [7] and in the United States in 2012 $245 billion.[8]

Objective(s) & Scope of work

It is aimed to Evaluate anti diabetic activity of *Barringtonia acutangula* (Leaves) in diabetes induced animal models. To assess the

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DESIGN, DEVELOPMENT AND EVALUATION OF SELECTED ANTIFUNGAL LOADED ETHOSOMAL GEL FOR TOPICAL DRUG DELIVERY

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ABSTRACT

In the present research work, an attempt was made to develop ethosomal gel of suitable antifungal drug and efficiency of ethosomes as novel lipid carriers for topical delivery of suitable drug has been evaluated. The ethosomal approach was selected to enhance the permeability of ketoconazole that increases bioavailability, reduce side effects, reduce large doses and increase the therapeutic efficacy. The ethosomal gel of ketoconazole was prepared by using cold method by using different concentration of ethanol and phospholipid. The prepared formulations were evaluated for drug entrapment efficiency, drug content, spreadability, viscosity, pH, homogeneity and grittiness, percentage yield and *in vitro* drug release studies. *In vitro* drug release studies were performed by using Franz Diffusion Cell for 8h. The results of FTIR analysis showed that there was no physical and chemical interaction between drug and other excipients. The formulation F5 was considered as best formulation. The data obtained from in vitro release study were fitted into various mathematical models like zero order, first order, Higuchi and Peppas. The results of mathematical modeling obtained indicated that it was best explained by zero order followed by Higuchimodel. The study indicated that the ethosomal gel of ketoconazole can effectively improve the bioavailability of drug by penetration enhancement and thereby reduce the frequency of administration. The ethosomal gel could be successfully prepared.

KEYWORDS: Ketoconazole, ethanol, phospholipid, ethosomes, topical drug delivery systems.

INTRODUCTION

Novel drug delivery is designed to improve the topical delivery of antifungal agents by

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A statistical study on the formulation development of sustained release tablets for valsartan sodium

Abstract

Objective: The purpose of the current research work was to study effect of formulation variables in a statistical way for the SR formulations of Valsartan sodium.

Methods: Valsartan sodium is an antihypertensive agent angiotensin–II receptor blocker belongs to BCS class–III agent. SR tablet formulations of Valsartan sodium were formulated using variable quantities of HPMCK100M and Xanthan Gum by direct compression method. quantities of polymers was chosen as independent variables, X_1 and X_2 respectively whereas, time required for dissolution 10%($t_{10\%}$), 50%($t_{50\%}$), 75%($t_{75\%}$) and 90%($t_{90\%}$) of drug from formulation were chosen as dependent variables. 9 formulations were prepared and evaluated for various pharmacopoeial tests.

Results: The results reveals that all formulations were found to be with in the acceptable limits and release rate profiles of all formulations were fitted to kinetic models. The statistical parameters were determined. Polynomial equations were developed for dependent variables. Validity of them was checked by countercheck formulations (C_1,C_2). According to SUPAC guidelines, formulation (F_4) containing mixture of 12% HPMCK100M and 16% Xanthan gum, was found to be identical formulation (dissimilarity factor f_1=1.763, similarity factor f_2=86.747 & No significant difference, t=0.0478) to marketed product (VALZAAR).

Conclusion: Formulation F_4 follows First order kinetics, Non–Fickian Diffusion Anomalous Transport. (n=0.826).

Keywords: valsartan sodium, 3^2 factorial design, sustained delivery, hpmck100m, xanthan gum, first order kinetics, anomalous transport

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Introduction

Oral route is the extensively used mode of administration for both conventional delivery systems and novel drug delivery systems. Tablets are the most famous solid dosage forms sold in the market. For chronic Therapy, immediate release formulations are required to be administered in repetitive mode results patient non–compliance.[1] However, oral administartion of majority of drugs facilitates hepatic first pass metabolism, results low systemic availability of active ingredient, shorter action and development of non–active or toxic metabolites.[2] The aim of developing SR formulations is to maintain sink conditions (C_{ss} levels for prolonged period). Systems such as modified release/timed release also similar to sustained drug delivery.[3–5] SR formulations shows reduction in frequency of administration in comparison with prompt release dosage forms.[6] SR formulations offers advantage over immediate release formulations by optimising characteristics of active ingredients. Polymers plays a key role in the release of drug from formulations. Polymers from natural sources are widely used in product development due to numerous advantages. Gums such as guar, xanthan, tragacanth, alginates, pectin etc. celluloss such as HPMC, HPC, CMC, SCMC extensively used for retarding property.

Formulations processed by Direct Compression (DC) technique, a simple approach because of Easer, rapid production, No degradative effects occurred during manufacturing, compliance.[6] The suitability of drug candidates for sustained release system based on biopharmaceutical, pharmacokinetic and pharmacodynamic properties of it.

Drug profile and rationality for experimental design

The aim of present research work, stastical study of formulating SR formulation of Valsartan sodium.

Valsartan sodium, antihypertensive agent, angiotensin–II receptor blocker, belongs to BCS Class–III agent. It is used for the management of myocardial Infarction, congestive heart failure. The main problem associated with this drug is, its low bioavailability (20–25%), shorter $t_{1/2}$(6hr). conventional tablets should be taken 2–3times a day to attain C_{ss}. Administration of Valsartan sodium in a sustained release formulation would be more beneficial for the management of hypertension. Hence, to reduce dosing frequency, improve therapeutic efficacy, patient compliance once daily sustained release Valsartan sodium is desirable.[7–13] Formulating a dosage form for obtaining a desirable drug release with minimum heuristics is essentilal. RSM with polynomial equation based concept has been efficiently utilised for optimization process. Hence an attempt is made in current work to design SR tablet formulations of Valsartan sodium using HPMCK100M and Xanthan gum by using 3^2 Factorial design technique. The significant variables such as quantity of HPMCK100M and Xanthan gum and dependent variables, i.e. $t_{10\%}$, $t_{50\%}$, $t_{75\%}$, $t_{90\%}$, (Time taken for dissolution 10%,50%,75%,90% of drug respectively).[14,15]

Materials and methods

Materials used in research work were procured from the various sources. Valsartan sodium was a gift sample from Meditech Pharma Ltd, Hyderabad, India. HPMCK100M, Xanthan gum, MCC and Lactose were procured from Loba Chemie Pvt.Ltd, Mumbai. Other

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A Study of Sociodemographic Profile, Awareness and Knowledge about Tuberculosis in Patients of Tuberculosis at Dots Centre

P Sivakumar, Anil Ahuja and T Venkatachalam

ABSTRACT

Introduction: Tuberculosis (TB) is an infectious disease caused by *Mycobacterium Tuberculosis*, is the second leading infectious cause of death in world. The study was carried out in the DOTS centre in Coimbatore region.**Material and Methods**: It was a cross – sectional observational, descriptive epidemiological study. This study was a humble effort to throw light on sociodemographic profile, knowledge and awareness regarding TB among patients with TB. **Results and Discussion:** A total of 300 patients were included in the study. Majority of the cases (31.66%) belongs to the age groups of 21-40 years. Out of 300 patients, 223 (74.33%) of patients had aware on the aetiology of tuberculosis. Most of the patients 210 (70.00%) were aware of fact that Tuberculosis could be transmitted from one person to another person via coughing and close contact. About 196 (65.33%) of patients had the knowledge about the importance of BCG vaccine for Tuberculosis. **Conclusion:** Apart from pharmacological treatment, poor knowledge of TB among patients on TB also needs great attention.

Key words: Tuberculosis, Knowledge of TB, RNTCP, Transmission.

1. INTRODUCTION

Tuberculosis is the first infectious disease reported by the world health organisation as a global threat to health. According to the experts in world health organisation every other person in the world is infected with tuberculosis and 5% of them will develop the disease in the next 5 years, unless they are diagnosed and properly treated.

A case of untreated smear positive TB can infect up to 15 people annually and more than 20 people during the natural course of untreated disease. The basic ways of setting control of tuberculosis are early diagnosis of the infected and bacillus secretors, adequate treatment, regular BCG vaccination, as well as raising health awareness and knowledge of the disease.

The revised national tuberculosis control programme (RNTCP), based on the internatinoally recommended directly observed treatment short course (DOTS) strategy, was launced in 1997 and achieved a nation wide coverage by march 2006. The RNTCP provides free diagnostic services and treament to benefit the poor and vulnerable groups of society.

Few studies conducted to know about the awareness of TB found that awareness and knowledge vary from place to place. A study regarding awareness about TB conducted in Surat, a region in south gujarat, India, showed 80% people know about symptoms of TB. Another study conducted by Indian chest society showed that 84% subjects were aware of the free treatment available for TB under national program. This study was a humble effort to throw light on sociodemographic profile, knowledge and awareness regrading TB among patients with TB.

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REVIEW ARTICLE

Pharmacological models to appraisement of antianxiety activity in experimental animals

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Abstract

The disease related to brain is very challenging task in the area of neuroscience research. Anxiety is one of the central nervous system disorders in which human feel excessive and unusual fear. Several antianxiety medicines available in market to treat and suppress this problem, but there is lack of evaluation methods available for them. The present review contains all the models such as plus maze apparatus, zero maze apparatus, forced swim apparatus, and open field methods, which are available for pharmacological evaluation of antianxiety. Accuracy can be achieved using these models in a comparative way and one has not to depend on any one model. Several modifications are also possible with these models to achieve accurate and precise result. Working principle of models is enlisted in this review to make them better understandable.

Key words: Actophotometer, anxiety, cognition, Hole board, plus maze, Rotarod apparatus

INTRODUCTION

Science has answered many questions around the world, but still there are several questions, which are not yet answered by science.[1] In field of pharmacological science, it is yet difficult to answer that question which is related to our brain and human psychology.[2,3] Brain is very complex structure that cannot be fully understood as such, for that, we have to continuously develop and modify our methodology. To answer questions related to brain and other nervous system pharmacologist working hard by involving new and innovative experimental models for the evaluation of disease such as anxiety, depression, sedation, excitement, Parkinson's, and many more.[4] In this review, different models are listed which are used in the evaluation of antianxiety activity in rat and mice.[5]

Health is defined as a state of complete physical, mental, and social well-being.[6,7] Anxiety is condition, which cause unwanted fear in individuals' mind. It may be fear of losing someone or getting die, sometime a small thing could be a reason of anxiety in population. According to the WHO study, there are about 10% of people in the world are suffering from acute or chronic anxiety.[8] Anxiety is a universal human experience, it is not a disease, and it is associated with several psychiatric disorders. Exact reason of anxiety is yet to be found, but it is believed that it is due to improper propagation of chloride channel and this is cured using different medicine of benzodiazepine categories.[9]

ANXIETY

In one word, we can say that anxiety is a feeling of fear. The object of fear may be true or that may be just an imagination, often general causes of anxiety are - tension of examination, arrangement of money for survival of family, the incident that had already happened, fear to stand in front of crowd, and

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Computational investigation of binding mechanism of substituted pyrazinones targeting corticotropin releasing factor-1 receptor deliberated for anti-depressant drug design

Shashank Shekhar Mishra, T. Venkatachalam, Chandra Shekhar Sharma, Hemendra Pratap Singh, Sourav Kalra & Neeraj Kumar

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ROLE OF DRUG OF CHOICE IN MANAGEMENT INTRACTABLE EPILEPSY

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ABSTRACT

To evaluate role of drug of choice in management of intractable epilepsy The majority of patients are young. In the study group the sex ration was almost equal. On categorizing the IE patients according to residence. Most of (92.2%) belongs to rural area. The main causes are – unhygienic conditions and a very high illiteracy rate. Lack of proper medical facility and good hospital could be another cause for high percentage of intractability of seizure in rural area.. According to educational status it is found that most of patients were illiterate having educational qualification below matriculation which lead to high rates of intractable epilepsy in this group. A large group of IE patients are unemployed (42.2%). Specific combination of AEDs in Intractable Epilepsy. Combination of phenobarbitone and carbamazepine was the most frequently used regimen in intractable epilepsy before changing the treatment regimen (41.1%), followed by phenobarbitone and phenytoin (36.7%), sodium valproate and clonazepam (10%). But after changing the treatment the most frequently used combination for intractable epilepsy are carbamazepine and clonazepam (40%) followed by carbamazepine and sodium valproate (37.8%).The use of phenobarbitone and carbamazepine combination has reduced and that of carbamazepine and sodium valproate combination has increased. Role of checking serum calcium levels in patients with Intractable Epilepsy In this study group it was found that around 53.3% of IE patients had a low serum calcium levels which is not producing classical signs of hypocalcemia namely tetany, peri- oral numbness but one patient had proven hypothyroidism.

Key words: EEG, Intractable epilepsy, Role of drug.

INTRODUCTION

Epilepsy is a group of neurological disorders characterized by spontaneous recurring seizures. It implies a periodic recurrence of seizures with or without convulsions. It is the most common serious neurological disorders and a global problem affecting all ages, social classes and countries. It is the second most common neurologic disorder after stroke. Epilepsy begins before the age of eighteen years in over 75% of patients [1]. Epilepsy means a tendency to have seizures and is a symptom of brain disease rather than a disease itself [2]. It is a major health issue and it imposes physical, psychological, social and economic burden on individuals, families and countries especially due to misunderstanding, fear and stigma. These problems are universal but are greatest in developing world were 85% of fifty million people with Epilepsy live and up to 90% or more receive no diagnosis or treatment [3]. Coming to the Indian scenario a study by Sreedharan and Murthy estimated the prevalence of Epilepsy in India and concluded that based on total projected population in India in the year 2001[4], the estimated number of people with Epilepsy would be 5.5 million.

MATERIALS AND METHODS

The study was conducted at the department of Neurology in Century Hospital, Mulakuzha, Chenganur, Kerala. The department of Neurology our patient clinic. Design of study Prospective and Descriptive study .Duration of Study was Ten months Selection criteria Inclusion Criteria Patients who have a definite diagnosis

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Research article

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Quality by design approach to analytical method development for simultaneous estimation of ibuprofen and famotidine in their combined dosage form by RP-HPLC method

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ABSTRACT

This article aims to explain the steps for application of quality by design (QbD) concept to analytical method development and validation, by using an example of simultaneous determination of Famotidine and Ibuprofen in its pharmaceutical dosage form by RP-HPLC. By using QbD tools, enable earlier understanding and identification of variables affecting the method performance. Fractional design and Central composite design were used for screening the variables and optimization of chromatographic conditions with building the design space employing a three factor three level Box– Behnken design (BBD) using ANOVA software. A QbD guide is described from identification of analytical target profile to definition of control strategy. The optimized chromatographic method was performed using 0.01M ammonium acetate buffer (pH 4): methanol: acetonitrile (50:50, 60:40, 40:60, 35:65 % v/v) as mobile phase at a flow rate 1.0mL/ min and UV detection at 225 nm.

Keywords: Ibuprofen; Famotidine; Quality by design; Design space; Central composite design; RP- HPLC; Validation

INTRODUCTION

Quality by Design (QbD) approach has been introduced by FDA for the pharmaceutical development to ensure a predefined product quality. Application of Quality by Design concept to the analytical method development leads to a more robust method. ICH guidelines Q8 (R2) defines QbD as "A systematic approach to development that begins with predefined objectives and emphasizes product and process control, based on sound science and quality risk management". In this approach potential method variables that affects the overall quality of method are defined, their interactions are studied, control strategy is implemented and finally the method is continually monitored [1-2].

Several HPLC methods for the individual estimation of Famotidine and Ibuprofen are available in the literature. [3-6] Although, there are scanty number of works describing the methods for the simultaneous determination of these drugs in combination with other drugs in pharmaceutical mixtures. However, there seems to be no reports

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Review article

Clinical research

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Outbreak of Nipha virus in India

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ABSTRACT

Nipah virus is an newly out broke virus from the animal species the exact reason for the virus out bake was not known clearly some scientist are concluded the point regarding the reoccurrence of the virus in the India after a gap of 8 years of last impact, this virus is mainly spreading because of the a kind of the cattle pigs and from the infected fruit bat. At first virus has been found in the region of the south East Asia islands later few developed countries has taken a step forward in order to control or eradicate the virus while few countries has left the solution for the problem. Recently a week back the virus has been observed in the south state of the India. As it was known fact that this virus is a zoonosis. Various countries are a step ahead in the research. When compared to the west part of the world the impact of the disease is more in the eastern part of the world. There is no particular vaccination for this virus, diagnosis for the disease is also a complex task.

Keywords: Pteropodidae family, Fruit bat, Henipavirus, Ribavirin

INTRODUCTION

Nipah virus is a newly outbreak zoonosis (disease which can be transmitted to humans from animals) natural host of this virus is fruit bats of pteropodidae family. Nipah virus was first found in year 1999 in pig farmers of kampong sungai Nipah region in Malaysia country. Transmission of the disease might be from direct contact with ill pigs' throat or nasal secretion, consumption of fruits or vegetables contaminated with urine or saliva from infected fruit bat.

Signs and symptoms of the infected Human will develop influenza like symptoms like fever, headache, myalgia, sore throat and vomiting along with this condition drowsiness and some neurological changes. Initially patients will be asymptomatic later they develop above mentioned conditions. Encephalitis and seizures occur in severe cases which progressively leads to coma within 24 to 48 hours. The incubation period is between 4 to 14 days. People who survived from acute encephalitis make a full recovery, but long term neurologic conditions have been reported in survivors. [1-5]

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HYPERTENSION-PRESCRIPTION PATTERN AND CONTROL IN PATIENTS ATTENDING ON OP DEPARTMENT IN A TERTIARY CARE HOSPITAL

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ABSTRACT

The study is aimed at determining the prescribing pattern and control of antihypertensive drugs in hypertensive patients at a tertiary care hospital. Hypertensive patients are treated depending on the level of their blood pressure. As there is a growing evidence of irrational prescribing of antihypertensive, which also lead to an increased cost burden on health care system, so it is necessary to analyze the prescribing patterns and the extent of adherence to prescribing guidelines, by the prescribers. This study will help to find out the prescribing pattern of antihypertensive. This study is **Prospective** Observational study conducted in outpatient Department of Medicine, MES Medical College, Perinthalmanna. Study population who satisfy the inclusion criteria and exclusion criteria. Study period is 6 months and sample size 200 patients. Inclusion criteria are patients treated with antihypertensive agents, patients of either gender ≥ 18 years of age. Exclusion criteria are patients from all department, except medicine department, pregnancy and breast feeding and patients with illegible, improperly and incompletely prescription. From these study calcium channel blockers are found to be more commonly prescribed compared to the other antihypertensive drugs. From the above antihypertensive drugs calcium channel blockers accounts for 50.34, followed by Angiotensin receptor blockers 24.13%, ACEIs 18.62%, Beta blockers 6.89% and least common agent was diuretics.

Key words: Joint National Committee, DASH , Diabetes Mellitus ,American Heart Association, Body Mass Index.

INTRODUCTION

Hypertension is an increasingly important medical and public health issue. Hypertension is a major risk factor for cardiovascular diseases and stroke. The risk of cardiovascular morbidity and mortality is directly correlated with blood pressure. The choice of drugs for the treatment of hypertension changes at short intervals. Efficacy, side effects, both short term and long term effects on other systems and cost are some of the factors responsible for the change. The market potential of these drugs causes the synthesis and release of newer drugs at a rapid rate which contributes in its own way to the choice of drugs made by physicians [1]. Hypertension is prevalent worldwide and is one of the most important risk factors for cardiovascular events. About 30% population has high BP. Prevalence is 30.1% and 27.1% among men and women, respectively according to estimates from National Health and Nutrition Examination survey from 1999 - 2000. Hypertension is very common in the elderly. Up to the age of 55 years more women have hypertension. According to a recent review on "Global Burden of Hypertension, the estimated prevalence of hypertension (in aged 20 years and older) in India in 2000 was 20.6% among males and 20.9% among females and is projected to increase to 22.9% and 23.6% respectively in 2025. In case of India, the prevalence rate has increased 30 times in urban population, and 10 times in rural population in the last 36 years. It has

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Research article

ASSESSMENT OF IN PATIENTS PRESCRIBING PATTERN OF ORAL ANTI DIAETIC DRUGS IN CENTURY HOSPITAL KERALA

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ABSTRACT

The main objective of the study is to analyze the prescribing patterns in type 2 diabetic patients on oral antidiabetic agents and to assess the awarness of patients about diabetes , its medication and lifestyle modification.A prospective study was carried out over a period of elevan months in general medicine department of diabetology century hospital kerala. The type 2 diabetic in-patients who were on oral hypoglycemic were enrolled in the study. A suitable data collection form was prepared and used to collect the required data. The demographic data, disease data and the utilization of various oral antidiabetic agents were analyzed and the knowledge of the patients was assessed by using a Michigan questionnaire. About 250 patients were recruited for the study. Among the study population 64.5% (155) were males. The majority of patients (69.6%) were in the age group of 41-60 years. About 54.16% of the patients have a history of diabetes less than 5 years. Metformin and Glimepiride was the most common drug used among the various oral antidiabetics prescribed. The present study found that majority of patients has knowledge about the disease, medication and lifestyle modifications. The present study shows that type 2 diabetes was prevalent more in males than females. The elderly patients were at high risk of developing type 2 diabetes. Metformin and Glimepiride was the most common drug used among the various oral antidiabetics prescribed.

Keywords: Diabetes, Oral antidiabetic agents, Prescribing Patterns, Metformin, Knowledge.

INTRODUCTION

India has one of the largest populations of diabetes in the world. The International Diabetes Federation (IDF) estimates the number of people with diabetes in India will reach 80 million by the year 2025. A survey depicts that 4% of adults in India suffered from diabetes in the year 2000 and is expected to increase to 6% by the year 2025. The World Health Organization (WHO) has projected that the global prevalence of type 2 diabetes mellitus will more than double from 5 million in 1995 to 300 million by 2025. Between 1995 and 2025, there will be a 35% increase in worldwide prevalence of diabetes mellitus, from 4 to 5.4% [1, 2].

Diabetes mellitus (DM) is a group of metabolic disorders characterized by hyperglycemia; is associated with abnormalities in carbohydrate, fat and protein metabolism; and results in chronic complications including microvascular, macrovascular, and neuropathic disorders. When the amount of glucose in the blood increases, e.g., after a meal, it triggers the release of the hormone insulin from the pancreas [3, 4].

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AN ATTITUDE & KNOWLEDGE OF PHARMACISTS TOWARDS PHARMACOVIGILANCE & ADR REPORTING AND BARRIERS - A CURRENT SCENARIO IN TAMILNADU

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ABSTRACT

Background: An adverse drug reaction (ADR) is associate degree injury caused by taking a medicine. The Study entitled "An Attitude & Knowledge of pharmacists towards pharmacovigilance & Adr reporting and barriers in current scenario; in Tamilnadu" was designed to assess the awareness of Pharmacovigilance and ADR reporting. Methods: This was a prospective cross sectional study involving registered community pharmacists and hospital pharmacists to evaluate the knowledge, perception and practice of pharmacovigilance which was conducted by face to face questionnaire over a period of 6 month duration included a total 274 (78%) participants out of 350. Results: Out of the total participants 222(81.02%) had fair knowledge about ADR, 79(28.83%) had fair knowledge, about pharmacovigilance. 68 (25.09%) of participants were aware of National Pharmacovigilance Programme in India, 41 (14.96%) of participants knew how to report an ADR and 112(40.87%) of participants knew when and what to be report as ADR. 245(84.41%) of pharmacists believed that the ADR reporting should be mandatory for pharmacists. Among the participants 78(28.46%) of pharmacists only had facility for ADR reporting. 212(77.37%) of participants unaware of excistence of national adr reporting system. Conclusion: This survey on pharmacovigilance and ADR reporting among pharmacists in Tamilnadu suggests that the pharmacist may lack in-depth understanding of the facts about ADR reporting and may need more information on the National Pharmacovigilance System and ADR reporting process. Since there is a need of educational programs about ADR reporting and pharmacovigilance in the pharmacy.

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Formulation and Evaluation of Oral Medicated Jellies of Cyproheptadine HCl

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ABSTRACT

Jellies are generally transparent to translucent non-greasy semisolid solutions or suspensions which is made up of small inorganic particles or large organic molecules interpenetrated by a liquid. Medicated Jelly formulations are more suitable to paediatric, geriatric, and dysphagic patients, offering rapid dissolution and absorption of drugs thereby early onset of action. The objective of the present study is to formulate and develop Cyproheptadine hydrochloride Novel Oral Jellies using different gelling agents. From the taste evolution studies it revealed, all Jellies (F1 to F9) where good in taste pH studies revealed, F8, F9 where within the standard pH of the Jellies of 3 to 3.4 drug constant studies showed all the formulation F1 to F9 where ideal since the drug content of all Jellies where within 90% to 110% stability studies indicate all formulation where stable at both room temperature and as low temperature. F8 & F9 had drug release of 107.55% in 20 minutes and 100.9% in 25 minutes, respectively. From entire studies it was concluded that F8 meets house specification this is the optimized batch.

Keywords: Medicated jellies, Cyprohepatidine HCl, Gelling agent.

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Formulation and Evaluation of Rosuvastatin Sustained Release Matrix Tablet

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ABSTRACT

The objective of the present study was to develop sustained release (SR) matrix tablets of Rosuvastatin. Tablets are prepared by direct compression technique using polymers HPMC K15M,HPMC K50M,PVP-K-30 , ethyl cellulose, Citric acid, Sodium bicarbonate and Magnesium Stearate .Tablets were evaluated for their physical characteristics viz.,hardness, thickness, friability and weight variation, drug content and floating properties. In vitro buoyancy and dissolution studies were performed for all the formulations. FT 1 TO FT 10 by using 0.1N HCL solutions at 37c. All the formulations were floated except FT 3 and FT6. The formulation FT10 containing 90mg of HPMC K4 M, 45mg HPMC K 100 M and 45mg of ethyl cellulose showed more sustained drug release time (12 hours) than other formulations. The formulation FT10 showed the controlled release for 24 hours. Thus FT10 was identified as ideal batch based on its results.

Keywords: Rosuvastatin, sustained tablets, gastric residence time, sustained drug delivery system.

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Formulation and Evaluation Studies of Floating Drug Delivery System Containing Cefdinir Antibiotic

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ABSTRACT

Floating matrix tablets are designed to prolong the gastric residence time after oral administration at a particular site. It is useful for achieving controlled plasma level as well as improving bioavailability.The objective of the present study is to design and formulae a floating tablet comparable to the marketed formulation with better stability, high production feasibility and excellent patient acceptability. Floating, and sustained release tablets are developed by using a combination of hydrophilic polymer (hydroxypropyl methylcellulose), Carbopol , Poly vinyl pyrrolidone, Effervescent agent (Sodium bicarbonate, Citric acid), filler, lubricant and anti-adherent with or without different proportions. The absorption maximum of Cefdinir was studied using UV spectrophotometry and found at 264 nm as the $_{max}$. Various formulations show good flow properties. Results of angle of repose Bulk density tapped density, Carr's index and Hausner's ratio shows satisfactory results. *In vitro* buoyancy study of Cefdinir floating was observed that as the amount of polymer increases the floating lag time decreases. *In vitro* dissolution study Formulation F11 shows 94.91 % sustained release at the end of 12 h and swelled to 121.38 % at the end of 8 hours. . Stability studies for the present work carried out at 25 ºC + -2 ºC/60% RH, 40 ºC + -2 ºC/75% RH.

Keywords: Cefdinir, Floating tablets, Buoyancy, Stability study.

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Formulation and Evaluation of Anti-Fungal Property Containing Fluconazole Gel

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ABSTRACT

Topical drug delivery of fluconazole, an antifungal drug, in gel form was formulated to avoid the side effect of the oral route. Thus these formulations are made for better patient compliance and to reduce the dose of drug and to avoid the side effects like liver damage and kidney damage. The gel was formulated by using the synthetic polymer like carbapol 934 by changing the polymer ratio. The gel was formulated by changing the polymer ratio. FT-IR study confirmed the purity of drug and revealed no interaction between the drug and excipients. Gel formulations were characterized for drug content, pH determination, viscosity measurement, in vitro diffusion, antifungal activity and skin irritation. Among the five formulations, F1 was selected as the best formulation as its %CDR after 4½ h was 97.845% and release rate of drug from F1 formulation is best fitted to Higuchi model. The viscosity of the F1 formulation was within the limits and F1 formulation did not show any skin irritation. Gel formulation F1 was found to be stable at 30 ±2°C and 65 ± 5 RH. It was found that at 40 ± 2°C and 75 ± 5 RH the gel formulation was not stable %CDR was decreased. Efficient delivery of drug to skin application was found to be highly beneficial in localizing the drug to desired site in the skin and reduced side effects associated with conventional treatment.

Keywords: Fluconazole, Topical gel, Gel forming agents, Topical delivery, Antifungal activity, Carbopol 934p.

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FORMULATION AND EVALUATION OF ORAL DISINTEGRATING TABLETS AND ORAL DISINTEGRATING FILMS OF LISINOPRIL

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ABSTRACT

The aim of this study is to formulate Oral Disintegrating Tablets (ODT) and Oral Disintegrating Films (ODF) of Lisinopril to achieve rapid dissolution, absorption and further improving the bioavailability of the drug. The formulations were developed with an objective to use by the pediatric and geriatric patients. Lisinopril Oral Disintegrating Tablets were prepared by direct compression method using crosspovidone, croscarmellose sodium, sodium starch glycolate and combinations of CP+CCS, and CP + SSG as super disintegrants exhibited good preformulation and tabletting properties. Of three super disintegrants, the formulation contained combination of CP + CCS showed better performance in terms of disintegration time when compared to other formulations. Order of the super disintegrant activity is (CP + CCS) > (CP + SSG) > CP > CCS > SSG. The formulation F15 was found to be the best among the all twenty Lisinopril ODT formulations because it has exhibited faster disintegration time (17.66 sec) when compared to the other formulations and it showed 99.87±0.18% drug release at the end of 25 min. Lisinopril Oral Disintegrating Films were prepared by solvent casting method using different grades of Hydroxy Propyl Methyl Cellulose like HPMC – E15, HPMC – 5cps, HPMC – 50cps. Of the three ODF formulations, formulation A3 exhibited faster disintegration time (22.39 sec) than formulations B1 and C1. Moreover formulation A3 showed 99.59±0.32% drug release at the end of 15 min. So ODF formulated with HPMC E15 (A3) is best formulation. The drug release was found to be fast in ODFs than ODTs. Results showed all batches of ODF formulations release more than 90% of drug within 8 min. Based on disintegration and dissolution results it was concluded that the formulation F15 contained CP 5% + CCS 5% was the best formulation among the all other ODT and ODF formulations.

Keywords: Lisinopril, Oral Disintegrating Tablets, Oral Disintegrating Films, FTIR

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Formulation and Evaluation of Sustained Release Bilayer Tablet of Flupirtine Maleate

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ABSTRACT

The objective of this present study was to design bilayer tablet of Flupirtine Maleate for biphasic release and in vitro evaluation of the same. Bilayer tablets comprised two layers, i.e. immediate release and Sustained release layer. The immediate release layer comprised crosspovidone as a super disintegrant and the Sustained release layer comprised HPMC K100M and HPMC K4M as the release retarding polymers. Direct compression method was used for formulation of the bilayer tablets. In vitro dissolution studies were carried out in a USP apparatus I, basket method. HPMC K100M and HPMC K4M Sustained the release of drug from the Sustained release layer for 24 hr. FTIR studies revealed that there was no interaction between the drug and polymers used in the study. The release of Flupirtine Maleate was found to follow a pattern of Higuchi model, indicating the drug release by diffusion controlled. Accelerated stability studies were carried out on the prepared tablets in accordance with ICH guidelines. There were no changes observed in physicochemical properties and drug release pattern of tablets. Biphasic drug release pattern was successfully achieved through the formulation of bilayer tablets in this study for improve patient compliance and give better disease management.

Keywords: Sustained release, Flupirtine Maleate, Biphasic release, Polymers HPMC K4M and HPMC K100M and Crosspovidone.

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FORMULATION AND EVALUATION OF OFLOXACIN MICROSPHERES BY USING ETHYL CELLULOSE AS A POLYMER AT DIFFERENT RATIO

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ABSTRACT

Ofloxacin is preferably absorbed from the upper part of the gastrointestinal tract and is readily soluble in the acidic environment of the stomach, the floating microspheres of ofloxacin were formulated to develop By Using Ethyl Cellulose as a Polymer at Different Ratio. These floating microspheres release the drug in the stomach and upper gastrointestinal tract and thereby improve the bioavailability. In the present study, three formulations of ofloxacin were prepared as floating microspheres by solvent diffusion technique using polymers such as ethyl cellulose, ethanol in different ratios. The prepared microspheres were evaluated for different physicochemical tests such as particle size, Percent Encapsulation Efficiency, Particle Size , Angle of Repose , drug content uniformity, In Vitro drug release studies and stability studies. The results of all the physicochemical tests of all formulations were found to be satisfactory. The formulation F1 showed better entrapment efficiency than other formulations. In-vitro drug release studies were carried out with formulation F1 to F3. All formulations showed the slow drug released initially, which may be ascribed to the low permeability of Ethyl cellulose. At the end of 8hrs, drug release from the Microspheres prepared with drugs: Ethyl cellulose ratios of 1:1, 1:1.5 and 1:2 were 61.71, 60.34 and 57.85 respectively. concluded that the ratio of 1:1 of Ofloxacin and ethyl cellulose produced the Microspheres with all desired characteristics and sustained release of drug for an extended period of 8 hours.

Keywords: Ofloxacin Microspheres, Ethyl Cellulose , Polymer

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FORMULATION AND EVALUATION OF DICLOFENAC SODIUM TRANSDERMAL PATCHES

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ABSTRACT

The objective of the present study was to develop *Diclofenac Sodium* Transdermal patches to bypass first pass metabolism and overcome all the problem of conventional dosage forms. A recent approach to drug delivery is to deliver the drug into systemic circuiation at predetermined rate using skin as a site of application. The release rate from TDS can be tailored by varying polymer composition. The patches containing 2% diclofenac di-ethanolamine DFD were prepared using Eudragit E100 and poly vinyl pyrrolidone (PVP) as the adhesive polymer by the solvent evaporation technique. The effects of different pressure-sensitive adhesive and various permeation enhancers (Tween-80, propylene glycol, azone, N-methyl-2-pyrrolidone, menthol) on the *vitro* percutaneous absorption of diclofenac across rat skin were evaluated using a 2-chamber diffusion cell system. Diclofenac is a NSAID agent used for the treatment of rheumatoid arthritis, osteoarthritis and relief the pain of varying origin treatment. Evaluation parameters like physical appearance, uniformity of weight, thickness, folding endurance, moisture content, drug content, dissolution study and diffusion study are all carried out. The results show that patches of diclofenac sodium obtained by the solvent evaporation method had acceptable physicochemical characteristics and satisfactory % drug release.

KEYWORDS: Diclofenac, polymers, matrix system, adhesives, permeation enhancer, diffusion cell system, polyvinylpyrrolidone (PVP), ethyl cellulose and solvent evaporation technique.

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