J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION'S

ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY

Ethirmedu, **B.Komarapalayam** – 638 183, Namakkal Dist. Tamilnadu. India

Approved by : Pharmacy Council of India, New Delhi & The Tamilnadu Dr.M.G.R Medical University, Chennai.

Website :www.jkkmmrfpharmacy.edu.in|E-Mail : principal@jkkmmrfpharmacy.edu.in

Contact No. : +919789456750, +919943069944, +919943066944

List of National/International papers published-Academic year 2020-2021

S NO	Title of Paper	Name of Author	Department of Teacher	Name of Journal	Year of Publication	ISSN /ISBN number
1.	Evaluation Of Anti Urolithiatic Activity Of Ethanolic Extract Of Leucas Aspera In Ethylene Glycol (Eg) Induced Urolithiasis	V.Suresh	Pharmacology	International Journal Of Biological And Pharmaceutical Research	2020-2021	0976-3651
2.	Evaluation Of Anti Convulsant And Anti Anxiety Activity Of Ethanolic Extract Of Antigonon Leptopus	G.Thamotharan	Pharmacology	International Journal Of Pharmacology Research	2020-2021	2249-7641
3.	In Silico Prediction And Comparative Modeling Of Proteins In Creeping Fig (Ficus Pumila) Plant	G.Thamotharan	Pharmacology	Journal Of University Of Shanghai For Science And Technology	2020-2021	1007-6735
4.	Evaluation Of Impact Of Available Oral Antibiotic Packages Over Environmental Antibiotic Pollution And Medication	D.Krishnarajan	Pharmacy Practice	World Journal Of Pharmacy And Pharmaceutical Sciences	2020-2021	2278-4357

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION'S

ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY

Ethirmedu, **B.Komarapalayam** – 638 183, Namakkal Dist. Tamilnadu. India

Approved by : Pharmacy Council of India, New Delhi & The Tamilnadu Dr.M.G.R Medical University, Chennai.

Website :www.jkkmmrfpharmacy.edu.in|E-Mail : principal@jkkmmrfpharmacy.edu.in

Contact No. : +919789456750, +919943069944, +919943066944

	Adherence; A Cross- Sectional Study In Tamilnadu					
5.	Evaluation Of Anxiolytic And Anticonvulsant Potential Of Mirabilis Jalapa Ethanolic Extracts On Standardized Rat Models	G.Thamotharan	Pharmacology	Journal Of University Of Shanghai For Science And Technology	2020-2021	1007-6735
6.	Comparative Study Of Anti Anxiety And Anti Depressant Potentials Of Leaves And Root Of Methanolic Extract From Achyranthes Bidentata Blume On Mice	G.Thamotharan	Pharmacology	International Journal Of Pharmaceutical Sciences And Research (Ijpsr)	2020-2021	2320-5148
7.	Formualtion And Evaluation Of Polymeric Microspheres Of Ferulic Acid	A.Chitra	Pharmaceutical chemistryInternational journal of pharmacology and clinical research2017-2018	International Journal Of Frontiers In Science And Technology	2020-2021	2321-0494
8.	A Review : Thrombocytopenia	K C.Arul prakasam	Pharmacy Practice	International Journal Of Trend In Scientific Research And Development2020-2021		2456-6470

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION'S

ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY

Ethirmedu, **B.Komarapalayam** – 638 183, Namakkal Dist. Tamilnadu. India

Approved by : Pharmacy Council of India, New Delhi & The Tamilnadu Dr.M.G.R Medical University, Chennai.

Website :www.jkkmmrfpharmacy.edu.in|E-Mail : principal@jkkmmrfpharmacy.edu.in

Contact No. : +919789456750, +919943069944, +919943066944

9.	Assessment On Safe Use Of Medication And Public Perspective About Clinical Pharmacist Among Healthcare And Non Health Care Personnel	A.Srinivasan	Pharmacy Practice	International Journal Of Pharmaceutical Research And Applications	2020-2021	2249-7781
10.	Assessment Of Efficacy, Safety, And Appropriate Use Of Filgrastim And Pegfilgrastim As Primary Prophylaxis For Neutropenia/Febrile Neutropenia In Chemotherapy Patients - A Prospective Observational Study	D.Krishnarajan	Pharmacy Practice	International Journal Of Current Pharmaceutical & Clinical Research	2020-2021	2349-7203
11.	Analytical Method Development And Validation For The Estimation Of Sofosbuvir And Ledipasvir In Material And Tablet Formulation By High Performance Thin Layer Chromatography(H ptlc) Method	P. Kalaiselvi	Pharmaceutical analysis	World Journal Of Pharmacetical Science	2020-2021	2278 – 4357

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183,
NAMAKKAL DISTRICT, TAMILNADU.

J.K.K.MUNIRAJAH MEDICAL RESEARCH FOUNDATION'S

ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY

Ethirmedu, **B.Komarapalayam** – 638 183, Namakkal Dist. Tamilnadu. India

Approved by : Pharmacy Council of India, New Delhi & The Tamilnadu Dr.M.G.R Medical University, Chennai.

Website :www.jkkmmrfpharmacy.edu.in|E-Mail : principal@jkkmmrfpharmacy.edu.in

Contact No. : +919789456750, +919943069944, +919943066944

12.	Comparative Study On Patient Councelling Using Pictogram Vs Patient Information Leaflet Among Copd Patient In Tertiary Care Hospital Salem District , Tamil Nadu	K C.Arul prakasam	Pharmacy Practice	Journal Of Pharma Research	2020-2021	2319-5622
13.	Approach To Enhance The Solubility Of Carvedilol Using Beta -Cd Complexation	S.Chandra	Pharmaceutics	World Journal Of Pharmaceutical Research	2020-2021	2277-7105
14.	Formulation And Evaluation Of Amlodipine Besylate Solid Dispersion	S.Chandra	Pharmaceutics	World Journal Of Pharmaceutical Research	2020-2021	2277-7105
15.	A Review On Sustained Release Drug Delivery System	S.Chandra	Pharmaceutics	World Journal Of Pharmaceutical Research	2020-2021	2277-7105
16.	Formulation Charecterization And Invitro Evaluation Of Transdermal Patches Of Ketoprofen With Different Polymer Concentration	S.Sangeetha	Pharmaceutics	World Journal Of Pharmaceutical Research	2020-2021	2277-7105

Dr. N. SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMAL COLLEGE OF PHARMACY,
ETHIRMEDU, KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT, TAMILNADU.

International Journal of Biological & Pharmaceutical Research

e- ISSN 0976 - 3651
Print ISSN 2229 - 7480

www.ijbpr.com

Research Article

EVALUATION OF ANTIUROLITHIATIC ACTIVITY OF ETHANOLIC EXTRACT OF LEUCAS ASPERA IN ETHYLENE GLYCOL (EG) INDUCED UROLITHIASIS

V.Suresh*, R.Lokeshvar, G. Thamotharan, R.Kannan, N.Deepan

Department of Pharmacology, JKKMMRF'S College of Pharmacy, Komarapalayam, Tamilnadu., India.

ABSTRACT

Background: Leucas Aspera is one of the important medicinal plants belonging to Lamiaceae., with significant herbal uses such as antifungal, antioxidant, antipyretic, antimicrobial, antinociceptive and cytotoxic activity .Leucas Aspera also possess high quantities of significant phytochemical constituents like triterpenoids, oleanolic acid, ursolic acid and b-sitosterol, nicotine, sterols, glucoside, diterpenes, which lead to use in many tropical countries. Due to its remarkable medicinal, nutritional and socio-economic value.this study was designed to clarify the protective effect of ethanolic extract of leucas aspera in ethylene glycol (eg) induced urolithiasis in rats. Materials and Methods: Thirty white Albino male rats were used in this study and after acclimatization rats were subjected to different treatments blood and tissue samples were collected at 29th day for the estimation of histopathological examinations and other parameters were utilized to investigate antiurolithiatic activity of ethanolic extract of Leucas Aspera Result : Leucas aspera showed significant Effect in the estimation of urinary parameters (Urine volume, pH of Urine, Calcium, Magnesium, Phosphorous, oxalate , Serum Constituents (urea, uric acid) , Creatinine , BUN) raised due to Ethylene Glycol induction. Ethanolic Extract of Leucas Aspera possessed a good urolithiatic activity at varying dose level 200mg/kg and 400mg/kg in extract altered urinary parameters produced by ethylene glycol which is dose dependent , the extract possessed significant urolithiatic activity at both dose level. Conclusion: From these results, it is suggested that Leucas Aspera possesses Antiurolithiatic properties.

Key Words:

Access this article online		
Home page: http://ijbpr.com/		Quick Response code
Received:12.04.21	**Revised**:22.05.21	**Accepted**:25.06.21

Corresponding Author

V.Suresh
Department of Pharmacology, JKKMMRF'S College of Pharmacy, Komarapalayam, Tamilnadu., India.

Email:-

INTRODUCTION

Formation and recurrence of kidney stones, one of the biggest challenges faced by urologists today, remains a major source of morbidity in human [Khaling Mikawalrawng et al (2014)]1. This increasing urological disorder of human health affecting about 12% of the world population has been associated with an increased risk of end-stage renal failure. Recurrent stone formation is a common problem with all types of stones and therefore an important part of the medical care of patients with stone disease [Nalini H S et al (2016)] 2

The development of stones is related to decreased urine volume or increased excretion of stone forming components such as calcium, oxalate, urate, cystine, xanthine, and phosphate. The stones form in the urine collecting area (the pelvis) of the kidney and may range in size from tiny to staghorn stones the size of the

Dr. N.SENTHILKUMAR,
PRINCIPAL,
JKK MUNIRAJAH MEDICAL RESEARCH FOUNDATION
ANNAI JKK SAMPOORANI AMMALCOLLEGE OF PHARMACY,
ETHIRMEDU,KOMARAPALAYAM - 638 183.
NAMAKKAL DISTRICT.TAMILNADU.

35

Vol 11|Issue 2| 2021 |39-45.

ISSN 2249 - 7641
Print ISSN 2249 - 765X

International Journal of Pharmacology Research

www.ijprjournal.org

EVALUATION OF ANTI-CONVULSANT AND ANTI-ANXIETY ACTIVITY OF ETHANOLIC EXTRACT OF *ANTIGONON LEPTOPUS*

Thamotharan G *, Gayathri K , V.Suresh , N. Senthilkumar, G.Muthukumaran, R.Kannan, N.Deepan

Department of Pharmacology, JKKMMRF'S College of Pharmacy, Komarapalayam, Tamilnadu, India.

ABSTRACT

The objective of the present study was to evaluate the anticonvulsant and antianxiety Activity of the ethanolic extract of *Antigonon leptopus* (EEAL). After preliminary Phytochemical evaluation, acute oral toxicity, antianxiety activity of ethanolic extract of *Antigonon leptopus* at doses of 125 and 250 and 500 mg/ kg was assessed using elevated-plus-maze (EPM), open field test (OFT) models and anticonvulsant effect was assessed using maximal electroshock (MES) and Isoniazid (INH) induced convulsion models. Oral administration of EEAL for seven days significantly increased number of entries and time spent in open arms in EPM model, number squares crossed and number of rearings in OFT. Further , EEAL (125 and 250 and 500 mg / kg) showed protected the mice against the isoniazid induced convulsions ; it causes significant($p < 0.01$ and $p < 0.001$) dose dependent increase the latency of convulsion. Treatment With EEAL reduced the duration of the tonic hind limb extension induced by Electroshock. Mechanistic studies showed significant improvement in brain GABA
Levels after after *Antigonon leptopus* treatment.

Keywords: *Antigonon leptopus,* Antianxiety, Anticonvulsant.

INTRODUCTION

Anxiety is an apprehension or excessive fear about real or imagined circumstances. The central characteristic of anxiety is worry or fear. Epilepsy is a common chronic Neurological disorder characterized by recurrent unprovoked seizures. These seizures are Transient signs and or symptoms of abnormal, excessive, or synchronous neuronal Activity in the brain Anxiety and epilepsy are biological disorders that affect one-eight Of the total population of the world and majority of the patients living in the developing Countries, where three-fourths of the patients are not receiving adequate treatment [1].

Synthettic anxiolytic drugs such as benzodiazepines (BDZ) and Buspirone (BUSP) are considered as the main category of compounds prescribed for Treatment of anxiety disorders. Unfortunately, they have several side effects such as Tolerance, amnesia, weakness, loss of sexual drive, gastrointestinal effects and changes. In body weight, sedation, muscle relaxation, and physical dependence, which lead patients To seek alternative therapies.[2] Researchers of today are exploring natural resources to discover safer and cost Effective drugs. Investigating plants, based on their use in traditional system of medicine, Is a sound, viable and cost-effective strategy to develop new drugs.[3] *Antigonon leptopus*. (Family: Polygonaceae) or coral vine is native Mexico and Commonly found in tropical asial, Africa, the Carribean and the Americas [4]. It is Commonly grown in gardens and often run wild. It is climbing vine; stems slender, Leaves are alternate, Flowers are bright pink, in panicled racemes that terminate in Tendril. Fruits of 1- seeded, hard nut let,3-gonous, biconvex, compressed [5].

Corresponding Author:- **Thamotharan. G** EMail ID:

Journal of University of Shanghai for Science and Technology

ISSN: 1007-6735

In Silico prediction and Comparative Modeling of proteins in Creeping Fig (*Ficus pumila)* plant

P. REVATHI[a]*, K. NIRUBAMA[b], G. THAMOTHARAN[c] AND M. BEUTLINE MALGIJA[d]

[a]Department of Botany, Kongunadu Arts and Science College, Coimbatore-641029, Tamil Nadu, India
[b]Department of Biochemistry, Kongunadu Arts and Science College, Coimbatore-641029, Tamil Nadu, India
[c]Department of Pharmacology, JKKMMRF College of Pharmacy, Komarapalayam,Tamil Nadu, India
[d]Bioinformatics Centre of BTISnet, Madras Christian College, Chennai, Tamil Nadu, India

*Address for Correspondence

Dr. P. Revathi,
PG and Research Department of Botany,
Kongunadu Arts and Science College (Autonomous),
Coimbatore- 641 029.
E-mail: revathip_bo@kongunaducollege.ac.in; reva.ponnusamy@gmail.com
Mob.: +919578580628

ABSTRACT

In the present study, the *Ficus pumila* have taken to analyze the proteins by their preliminary characters from the database and predicted vital role of different sequences. The *F. pumila* (Creeping fig) is a prostrate/climbing shrub, experiments proved various active phytochemicals and antioxidant, antimicrobial, antimutagenic, analgesic, anti-inflammatory, antiproliferative, hypoglycemic, hypolipidemic, anti-hyperprolactinemic, anticholinesterase, nephroprotective properties. In addition to all metabolites, it also constitutes specific proteins that were evaluated through *insilico* homology modeling. Though it is considered as a poisonous weed, the protein present in this plant is evaluated by physicochemical, phylogeny and amino acid proportions by protparam, Swiss model, SOPMA, Clustal omega tools to describe its structural features and to understand molecular function. The computed theoretical isoelectric point (pI) found to be more than 7 indicates basic nature of proteins. The aliphatic index ranges 67-113 indicates thermal stability of proteins. The predicted Grand average hydropathy(GRAVY) shows possibilities of enhanced interaction of these proteins with water by lowest value. Functional analysis of these proteins was performed by SOSUI server which predicted transmembrane helix and solubility. Secondary structure analysis was carried out by SOPMA revealed that Alpha helix and random coil dominated followed by extended strand, and beta turns among secondary structure elements. The modelling of three-dimensional structure of proteins was performed by Swiss model. The model was validated using protein structure checking tool- VADAR. Particularly, NAD(P)H – quinoneoxidoreductase and Glyceraldehyde-3-phosphate dehydrogenase structures were analysed by phylogenetic analysis to trace relationship and reported. The results suggesting its possible role in cellular and metabolic functions.

Keywords: *NAD(P)H –quinone oxidoreductase; Glyceraldehyde-3-phosphate dehydrogenase; Ficus pumila; phylogeny; Plant protein; Phylogenetic analysis*

INTRODUCTION

Recent advances in sequence analysis methods and software have revolutionized the characterization and phylogenetic studies [1]. The availability of structural models of proteins is the key to understanding biological processes at a molecular level. The lot of protein sequences that can be modeled, as well as the exactness of the prediction, is growing gradually because of the growth and number of known protein sequences and structures as well as advances in the modeling software [2].

Sequence databases are of special importance for different fields of biological research because they are comprehensive sources of information on nucleotide sequences and proteins primary, secondary and tertiary characters. The tools for the computational analysis of the data and retrieved sequences are necessary resources for biological and medical research [3]. Plants are an abundant source of natural components especially proteins. In this study, proteins of *F.*

37

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES

SJIF Impact Factor 7.632

Volume 10, Issue 9, 2314-2360 Research Article ISSN 2278 – 4357

EVALUATION OF IMPACT OF AVAILABLE ORAL ANTIBIOTIC PACKAGES OVER ENVIRONMENTAL ANTIBIOTIC POLLUTION AND MEDICATION ADHERENCE; A CROSS-SECTIONAL STUDY IN TAMILNADU

D. Krishnarajan[1], K. Siva Sakthi[1], M. Sarukhan*[2], M. Silpa Gopinath[2] and L. Naomi[2]

Department of Pharmacy Practice JKKMMRF's - The Tamil Nadu Dr. M.G.R. Medical University 69, Anna Salai, Rd, Guindy, Chennai, Tamil Nadu 600032.

Article Received on
05 July 2021,

Revised on 25 July 2021,
Accepted on 14 August 2021,

DOI: 10.20959/wjpps20219-19917

***Corresponding Author**
M. Sarukhan
Department of Pharmacy Practice JKKMMRF's - The Tamil Nadu Dr. M.G.R. Medical University 69, Anna Salai, Rd, Guindy, Chennai, Tamil Nadu 600032.

ABSTRACT

Introduction: Huge antibiotics are getting wasted from retail pharmacies and as personal waste which contributes to antibiotic pollution. It is a major cause of antibiotic resistance which is a global health issue. This study is to evaluate the wastage of antibiotics from personal use as well as from retail pharmacies and to study the usefulness of compliance packs over antibiotic wastage and to increase medication adherence. **Data collection:** We collected details using self-prepared questionnaires. Data was collected through face-to-face interviews and online platforms. Descriptive statistics were used to analyze the results. **Results:** The study indicated 53% of the solid oral antibiotic packs were mismatched and 46% were following the guidelines. 10% of the total antibiotics prescribed to the whole population were missed by the patient. The unused antibiotics directly Go to the environment through sewage or municipal waste. 5.75 numbers of antibiotics are wasted on average in each retail pharmacy in a week. More than one-third of them agreed that the wastage is due to packaging issues and 99% of them are sure about the compliance packages that reduce the wastage of antibiotics. **Conclusion:** Lack of proper awareness about environmental antibiotic resistance, compliance packs as a solution to this issue, and Irrational use of antibiotics results in serious morbidity and mortality as well as additional economic burden leading to a reduction in the quality of a drug, thereby wastage of resources, increased treatment cost, increased risk for adverse drug reactions and emergence of resistance.

Journal of University of Shanghai for Science and Technology

ISSN: 1007-6735

Evaluation of anxiolytic and anticonvulsant potential of *Mirabilis jalapa* ethanolic extracts on standardized rat models

M. Kumar [a], G. Thamotharan [*a, b], P. Revathi [c] and S. Shyji [b]

[a]Vinayaka Mission's College of Pharmacy, Salem-636008, India.

[b]J.K.K.MMRF'S Annai J.K.K.Sampoorani Ammal College of Pharmacy, Komarapalayam, India.

[c]Kongunadu Arts and Science College, Coimbatore-641 029, India

***Address for Correspondence**

Mr. G. Thamotharan

JK.K.MMRF'S Annai J.K.K.Sampoorani Ammal College of Pharmacy,

Komarapalayam, India

E-mail:thamotharanphd19@gmail.com

Mob :+91 9025265999

IJPSR (2021), Volume 12, Issue 10 (Research Article)

INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES AND RESEARCH

Received on 15 October 2020; received in revised form, 05 March 2021; accepted, 23 June 2021; published 01 October 2021

COMPARATIVE STUDY OF ANTI-ANXIETY AND ANTI-DEPRESSANT POTENTIALS OF LEAVES AND ROOT OF METHANOLIC EXTRACT FROM *ACHYRANTHES BIDENTATA* BLUME ON MICE

M. Kumar [1] and G. Thamotharan [*1, 2]

Department of Pharmaceutical Chemistry [1], Vinayaka Mission's College of Pharmacy, Salem - 636008, Tamil Nadu, India.

Department of Pharmacology [2], JKKMMRF's- Annai JKK Sampoorani Ammal College of Pharmacy, Komarapalayam, Namakkal - 638183, Tamil Nadu, India.

Keywords:

Anxiety, Depression, Potential, *Achyranthes bidentata*, mice

Correspondence to Author:
G. Thamotharan

Associate Professor,
Department of Pharmacology,
JKKMMRF's, Annai JKK Sampoorani Ammal College of Pharmacy, Komarapalayam,
Namakkal - 638183,
Tamil Nadu, India.

E-mail: jthams0309@gmail.com

ABSTRACT: Anxiety and Depression is the most prominent and crippled Neuropsychiatric Disease. World Health Organization (WHO) reported is the most burdensome disease of society. We therefore aimed at evaluating the Anti-Anxiety and Anti-depressant potential using *Achyranthes bidentata* Blume (Chinese name Huainiuxi). This study compared Leaves and Root part of Achyranthes bidentata methanolic extract (ABME) on standardized mouse models of Anxiety and depression. The dried Leaves and Root was macerated with methanol separately and administrated and discern the dose of 100 mgk g^{-1} p.o. and 200 $mgkg^{-1}$ p.o. of *Achyranthes bidentata* methanolic extract of Leaves (ABMEL) and the dose of 100 $mgkg^{-1}$ p.o and 200 $mgkg^{-1}$ p.o. of *Achyranthes bidentata* methanolic extract of Root (ABMER) were employed in Elevated Plus Maze test (EPM) and Open field test (OFT) with 1 $mgkg^{-1}$ i.p of Diazepam as a standard drug to assess the anxiolytic activity and Modified Forced Swim test (MFST) and Tail suspension test (TST) with 15 $mgkg^{-1}$ i.p. of Imipramine as a standard drug to assess the anti-depressant activity in Swiss albino mice. Substantial changes in all tested activities EPM, OFT in anxiety model and MFST, TST in depression model were observed for 28 days. The results revealed that ABMER (200 $mgkg^{-1}$ p.o.) was more impetus due to the high amount of flavonoid content possess anti-anxiety and anti-depressant potential compared to ABMEL (200 $mgkg^{-1}$ p.o.) as well as ABMER (*$p<0.05$) produce significant effect compared to the standard group.

INTRODUCTION: Medicinal plants are luminous to the world and act as a mainspring to drug discovery. The Chinese traditional medicine *Achyranthes bidentata* Blume (Amaranthaceae) commonly known as ox knee, sennayuruvi, Root Apamarga [1].

QUICK RESPONSE CODE

DOI: 10.13040/IJPSR.0975-8232.12(10).5378-87

The article can be accessed online on www.ijpsr.com

DOI link: http://dx.doi.org/10.13040/IJPSR.0975-8232.12(10).5378-87

It is a Straggling perennial herb up to 1 m tall, tingled purple, appressed pubescent or nearly glabrous branches opposite, annual herb distributed hilly region India and China. It is enhancing neural plasticity and increase hippocampal neurogenesis and prevent stress-induced hippocampal neuron atrophy.

It promotes Peripheral nerve regeneration in rodents [2, 3]. It alleviates asthma, skin rashes, diarrhoea, renal dropsy, scrofula and impotence [4]. Medicinally *Achyranthes bidentata* is used as anti-aging, anti-tumor, anti-pyretic, anti-inflammatory, immunomodulatory and diuretic activity, anti-

INTERNATIONAL JOURNAL OF FRONTIERS IN SCIENCE AND TECHNOLOGY
www.ijfstonline.org

Research Article

ISSN 2321 – 0494

Indexed in CAS, OPEN J-gate and GOOGLE SCHOLAR
Received on: 10.10.2020, Revised and Accepted on: 11.11.2020

Formulation and Evaluation of Polymeric Microspheres of Ferulic Acid By Molecular Docking Studies

Dr. A. Chitra *., J. Suganya.
Department of Pharmaceutical Chemistry
Annai JKK Sampoorani Ammal College of Pharmacy, Namakkal District, Tamil Nadu, India

Abstract

The present work focus on the study is to perform the spectral characterization molecular docking studies and formulation and evaluation of polymeric microspheres from the natural product ferulic acid. The microspheres of ferulic acid are prepared by solvent evaporation method. The polymeric form of Eudragit RS 100 is used for the study. The molecular docking studies is carried out by using auto dock 4 suite. The molecular docking of ferulic acid with various enzymes gives various activities. The invitro drug release for ferulic acid microspheres was observed.Materials: Ferulic Acid collected from P.C. Chem., Mumbai, Eudragit RS 100, distilled water, n-hexane.Method: According to this study the solvent evaporation method is used for the preparation of ferulic acid microspheres. The polymer ratio are 1:1, 1:1.5, 1:2, 1:2.5. Results :The characterization studies of ferulic acid, H-NMR, 13CNMR and IR are studied. The in-vitro drug release of ferulic acid microspheres was observed. Conclusion: All the trial batches invitro drug release were decreased with increasing the Eudragit concentration regarding property of polymers. The drug polymer coated with different concentration of Eudragit RS 100 has proved to be efficient carrier for diffusion controlled release of microspheres of ferulic acid in sustained drug release.

Keywords: Ferulic acid microspheres, molecular docking, Eudragit RS 100 , Autodock 4 suite

INTRODUCTION

Ferulic acid is a hydroxy cinnamic acid. It is a phenolic compound. Ferulic acid found in vegetable sources; bran (the hard outer layer of grain), flax seed; barley, etc. Microspheres are referred as micro particles. It is a small spherical particles with diameter in micrometer range (1 ^um to 1000 ^um). They are free flowing powder consisting of proteins (or) synthetic polymers. Polymeric microspheres have been designed and to overcome some problems like poor stability, low solubility, and increase frequency of administration due to shorter half life, synthetic of material polymers are used in preparation of microspheres. Biodegradable polymers are widely used to achieve controlled release of drugs after performing their tasks they break down in a biologically friendly manner.

International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 5 Issue 6, September-October 2021 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

A Review: Thrombocytopenia

D. N. Ashritha, Subhashini. A, Dr. K. C. Arul Prakasam, Deborah Rose

Department of Pharmacy Practice, JKKMMRF's Annai JKK Sampoorani Ammal College of Pharmacy, Komarapalayam, Tamil Nadu, India

ABSTRACT

Thrombocytopenia is defined as a platelet count that falls below its normal range. The normal value of platelets for an adult is 150000 to 450000/ microliter. A platelet count of more than 450000/microliter is called thrombocytosis and a platelet count of less than 150000/microliter is called thrombocytopenia. Various types of thrombocytopenia occur based on theircause such as immune thrombocytopenic purpura, heparin-induced thrombocytopenia, thrombotic thrombocytopenic purpura, immune thrombocytopenia, and drug-induced thrombocytopenia. Various causes of thrombocytopenia are due to some of the drugs, diseases and disorders, chemical exposures, microorganisms, and some rare conditions that cause blood clots. The underlying pathophysiology of thrombocytopenia is decreased platelet production, increased platelet destruction, and platelets redistribution. The effective diagnosis and treatment may help the patient improve in their quality of life and help to achieve an optimal therapeutic outcome. The scope of this review is to describe thrombocytopenia, types, etiology, pathophysiology, diagnosis, pharmacological treatment, non-pharmacological treatment, and its prevention.

KEY WORDS: *Thrombocytopenia, Etiology, Types, Pathophysiology, Sign and Symptoms, Diagnosis, Treatment*

How to cite this paper: D. N. Ashritha | Subhashini. A | Dr. K. C. Arul Prakasam | Deborah Rose "A Review: Thrombocytopenia" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-5 | Issue-6, October 2021, pp.1444-1448, URL: www.ijtsrd.com/papers/ijtsrd47659.pdf

IJTSRD47659

INTRODUCTION:

Platelets are also called thrombocytes. Platelets are small colorless cell fragments that are present in the blood. In 1841, George Gulliver drew pictures of platelets. He used a twin-lens compound microscope. In 1842, William Addison drew pictures of a platelet fibrin clot. In 1864, Lionel Beale was the first to publish a drawing showing platelets. When a count of platelets falls below its normal range is called thrombocytopenia. The normal value of platelets in adults is 150,000/microliter to 450000/ microliter.[1] In blood vessel injuries, platelets form plugs and stop bleeding by clumping.[2] Platelets helped in clot formation and stopped or prevented bleeding and it helps to maintain the integrity of the blood vessels walls. In the bone marrow, platelets are made. Bone marrow is present inside the bones and it is a sponge-like tissue. Stem cells are present in the bone marrow that develops into red blood cells (RBC), White blood cells (WBC), and platelets. [3,4,5] Thrombopoietin regulates platelet production.[6] In a healthy body, platelets can live about 10 days.[16]When the platelet count reduces below 100,000/microliter, spontaneous bleeding will occur.[1,7]Aplastic anemia and Leukemia are blood diseases that are associated with thrombocytopenia. They contribute to the impaired production of platelets. A complete blood count test shows platelets numbers.[8] The reasons for thrombocytopenia are making decreasing numbers of platelets, destruction of platelets increased, and distribution of platelets changing.[10]Low platelets occur when the damage of bone marrow cannot make enough of its platelets, Severe bleeding causes lost platelets due to surgery and traumatic injury and, many platelets are removed by the spleen because of the filter process[3]The Reducing the risk of thrombocytopenia is avoiding alcohol consumption because alcohol slows platelet production, avoiding environmental toxins as it can reduce platelet production, avoiding thrombocytopenia caused medications, and receiving medical professionals recommend drugs and vaccinations.[17]Severe thrombocytopenia such as intracerebral and intraabdominal bleeding may be life-threatening and diagnosing the condition immediately can save the life.

42

International Journal of Pharmaceutical Research and Applications
Volume 6, Issue 5 Sep-Oct 2021, pp: 806-816 www.ijprajournal.com ISSN: 2249-7781

Assessment on Safe Use of Medication and Public Perspective about Clinical Pharmacist among Healthcare and Non Health Care Personnel

Srinivasan.A1,AthiraRajkumar 2,Jebisha Y.J 2,Mohanapriya.M 2*
The Tamil Nadu Dr. M.G.R. Medical University Department of Pharmacy Practice
JKKMMRF's - AnnaiJKKSampooraniAmmal College of Pharmacy, B. Komarapalayam - 638183, Namakkal (DT), Tamilnadu

Date of Submission: 01-10-2021 Date of Acceptance: 15-10-2021

ABSTRACT

BACKGROUND: Clinical Pharmacy services promote patient care and also helps in optimization of medication therapy. Now Clinical Pharmacy practices were emerged and it has been recognised in multidisciplinary setup in Health care system. The main aim was to assess the knowledge attitude and practice on safe use of medication and public perception about clinical pharmacy practice role in Indian Health care settings among health care and non health care personnel.

MATERIALS AND METHODOLOGY : The Observational cross sectional study was conducted through Google form among 215 participant for a period of 6 months.The Questionnaire consists of Demographic details, Knowledge, Attitude, Practice and Perspective about Clinical Pharmacy practice role.Statistical package instat, was used for analysing the data and descriptive statistics and unpaired t test were performed to determine association between KAP on safe use of medication among Health care personnel and Non Health care personnel. **RESULTS:** Among 215 Participants, Only 15 % of health care and 46% of non health care personnel have poor knowledge , 10.5 % of healthcare and 22.5 % of non healthcare personnel have low attitude and 8.5% of healthcare and 11 % of non healthcare personnels have poor practice on safe use of medicines. Among 215 study participants, in which 79.07% of Health care and 27.13% of Non-Health care personnel have heard about'Clinical Pharmacist' Profession. Majority of Non-Health care Personnel (82.95%) don't know the differences between Clinical Pharmacist and Hospital Pharmacist. **CONCLUSION:** The present study concludes that Health care personnel have Good knowledge and High attitude on safe use of medication than Non Health care personnel and also some misconceptions were observed in both groups regarding medication use. Majority of non healthcare personnels were unaware of the existence and role of Clinical Pharmacy services in Health care.

Key words: Clinical Pharmacy, Health care personnel, Non Health care personnel, Observational study, Misconception.

I. INTRODUCTION:

The ultimate goal of medication use is to minimize the patient risk and achieve therapeutic outcome along with improved quality of life of the patient. The rational use of medication involves the use of right drug with right dose according to their own individual requirement, at low cost to the community and that should be appropriate to their clinical needs.(1) Some of the medication error results into morbidity and mortality and remain undetected and also increases the hospital stay that leads to inappropriate medication use. With the help of clinical pharmacist and other health care professional, medication errors can be prevented(2) WHO reported that more than 50% of all medicines were inappropriately prescribed and dispensed and 50% of patients were taking medicines incorrectly around worldwide.

In our country irrational use of drugs haveseveral reasons, they are:

- Lack of Information: In India, we don't have proper facilities regarding currently used drugs with up to date information. Majority of practitioners depends on Medical representatives.
- Inadequate training of medical graduates: Lack of proper clinical training regarding writing a prescription during training period, dependency on diagnostic aid, rather than clinical diagnosis, is increasing day by day in doctors.

43

ISSN 2349-7203

IJPPR
INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
An official Publication of Human Journals

HUMAN

Human Journals
Research Article
July 2021 Vol.:21, Issue:4

Assessment of Efficacy, Safety, and Appropriate Use of Filgrastim and Pegfilgrastim as Primary Prophylaxis for Neutropenia/Febrile Neutropenia in Chemotherapy Patients - A Prospective Observational Study

IJPPR
INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
An official Publication of Human Journals
ISSN 2349-7203
HUMAN

REKHA B[1*], KRISHNARAJAN D[2], RAMYA A[3], HEERA.V[4], MARIA REJI[5], PETER PRINCE J[6]

1PHARM-D INTERN- JKKMMRF'S AJKKSA college of pharmacy, MGR UNIVERSITY, India.

2M pharm., PhD., department of pharmacy practice, JKKMMRF'S AJKKSA college of pharmacy, India.

3M pharm., department of pharmacy practice, JKKMMRF'S AJKKSA college of pharmacy, India.

4PHARM-D INTERN- JKKMMRF'S AJKKSA college of pharmacy, MGR UNIVERSITY, India.

5PHARM-D INTERN- JKKMMRF'S AJKKSA college of pharmacy, MGR UNIVERSITY, India.

6PHARM-D INTERN- JKKMMRF'S AJKKSA college of pharmacy, MGR UNIVERSITY, India.

Submitted: 23 June 2021
Accepted: 30 June 2021
Published: 30 July 2021

HUMAN JOURNALS
www.ijppr.humanjournals.com

Keywords: Febrile neutropenia, pegfilgrastim, filgrastim, bone pain

ABSTRACT

Prophylaxis with recombinant G-CSF is recommended to prevent febrile neutropenia. Even though the G-CSF use was reported to reduce the incidence of neutropenic events, its use must outweigh the serious adverse events. Due to the substantial reduction in the cost of growth factors, there has been extensive use even with chemotherapy regimens having a lower risk of neutropenia (< 20%). So the purpose of our study is to assess the efficacy, safety & appropriateness of filgrastim and pegfilgrastim when given as primary prophylaxis for neutropenia/FN in patients undergoing chemotherapy. We conducted a prospective observational study for 6 months at a single institution in Salem, Tamilnadu. A total of 46 patients were included. The primary outcome measure of efficacy is in the terms of the Absolute neutrophil count, Total WBC count, and body temperature. And the adverse effects associated with the G-CSF'S are assessed via the direct interview with the patient using the checklist and graded by using the CTCAE. The appropriateness was assessed using the NCCN guidelines. 17.3 % of patients developed FN/Neutropenia, despite being given the G-CSF prophylaxis. The most commonly observed AE was mild-moderate bone pain which constitutes about 26.3 % in the pegfilgrastim group and 22.2% in the Filgrastim group. 55.09% of the cost of the G-CSF total doses contributed by appropriate use and 44.90% of the cost of the total doses accounted by inappropriate use of G-CSF which implies the additional treatment-related costs. The FN incidence was higher among the patients who received Filgrastim than Pegfilgrastim prophylaxis. The incidence of bone pain was higher among the patients who had not been given the prophylaxis for the bone pain. In the patients with inappropriate use of G-CSF, the mean number of avoidable doses per patient was 2.45 (±1.66).

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES

SJIF Impact Factor 7.632

Volume 10, Issue 9, 2241-2252 Research Article ISSN 2278 – 4357

A44

ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR THE ESTIMATION OF SOFOSBUVIR AND LEDIPASVIR IN RAW MATERIAL AND TABLET FORMULATION BY HIGH PERFORMANCE THIN LAYER CHROMATOGRAPHIC (HPTLC) METHOD

Ramesh Jayaprakash[1*], Anandakumar Karunakaran[1], Kailasam Periyana Gounder[3], Kalaiselvi Ponnusamy[2], Anjana Elampulakkadu[1]

Department of Pharmaceutical Analysis
[1]Swamy Vivekanandha College of Pharmacy, Elayampalayam, Tiruchengode, Namakkal-DT. Tamilnadu, India.
[2]JKK Munirajah Medical Research Foundation's- Annai JKK Sampoorani Ammal College of Pharmacy, Komarapalayam, Namakkal -DT, Tamilnadu, India.
[3]Sun Pharmaceutical Industries Ltd, Halol, Vadodara, Gujarat, India.
The Tamilnadu DR M.G.R. Medical University, Chennai

Article Received on
30 June 2021,

Revised on 20 July 2021,
Accepted on 10 August 2021

DOI: 10.20959/wjpps20219-19851

***Corresponding Author**
Dr. Ramesh J.
Department of Pharmaceutical Analysis Swamy Vivekanandha College of Pharmacy, Elayampalayam, Tiruchengode, Namakkal-DT. Tamilnadu, India.

ABSTRACT

A simple, sensitive and rapid high performance thin layer chromatographic (HPTLC) method has been developed and validated for quantitative determination of Sofosbuvir (SFB) and Ledipasvir (LDP) in bulk and formulations. The chromatographic development was carried out on HPTLC aluminum plates precoated with silica gel 60 F254 using a mixture of ethyl acetate, methanol, toluene, acetone and acetic acid (2:1.5:4.5:2.0:0.2) (v/v/v/v) as mobile phase. Detection was carried out densitometrically at 269 nm. The R_f value of SFB and LDP were found to be 0.19 and 0.06 respectively. The method was validated as per ICH guidelines with respect to linearity, accuracy, precision, robustness etc. the calibration curve were found to be linear over a range of 200-1200 ng/spot and 45-270 ng/spot for SFB and LDP respectively, with a regression coefficient of 0.9979 and 0.9986 for SFB and LDP respectively. The accuracy was found to be very high 99.41-100.04 and 99.64-100.64 for SFB and LDP respectively. %RSD values for intra-day and inter-day variation were less than 2. The method has demonstrated high sensitivity and specificity. The method

45

Larix Publications

LARIX INTERNATIONAL Your Global Research Partner

Journal of Pharma Research
https://jprinfo.com/

JPR INFO.com Journal of Pharma Research

Vol. 9, Issue 11, 2020 ISSN: 2319-5622 USA CODEN: JPROK3

Original Article

COMPARATIVE STUDY ON PATIENT COUNSELING USING PICTOGRAM Vs PATIENT INFORMATION LEAFLET AMONG COPD PATIENTS IN TERTIARY CARE HOSPITAL SALEM DISTRICT, TAMILNADU

Arul Prakasam.K.C*, Beny Margrat C.F, Sophy. S, Vidhyalakshmi.K.B

** Department of pharmacy practice, JKKMMRF'S Annai Jkk Sampoorani Ammal College of Pharmacy, Ethirmedu, B. Komarapalayam-638183, Namakkal District, Tamilnadu, The Tamilnadu Dr. MGR Medical University Chennai.*

Received on: 31-10-2020; Revised and Accepted on: 30-11-2020

ABSTRACT

COPD is a lung disease characterized by chronic obstruction of lung airflow that interferes with normal breathing and is not fully reversible. Emphysema and chronic bronchitis are the two most common conditions that contribute to COPD.
Patient education has been defined as a systemic process of providing information, advice and behavior modification techniques to improve the patient's ability to make informed decisions regarding their disease and medications.
***Objective:** To assess the knowledge attitude practice and to compare the effectiveness of patient counseling by using pictogram and patient information leaflet in COPD patients.*
***Methods:** A total of 170 patients with COPD were enrolled in the study of 6 months duration, patients were divided in to two groups according to the counseling aids used. Knowledge, attitude, practice (KAP) of patient regarding COPD were assessed and recorded at baseline by using KAP questionnaire. The baseline KAP results suggested that patients had a poor perception about their disease. Then the patients were educated about their disease and treatment by using counseling aids either PIL or PIC. At the next follow-up, the KAP questionnaire was again given to the patient. It shows that patient education improved the KAP score of the patients and they were able to answer the same questions given at baseline. The usefulness assessment questionnaire was given to evaluate of PIL and PIC.*
***Result:** It showed a significant improvement in KAP results after counseling in both groups. The usefulness assessment questionnaire shows greater significance in pictogram when compared to patient information leaflet.*
***Conclusion:** The study concluded that the pictogram is effective in illiterate and literate people were patient information leaflet is helpful only for literate patients. The post knowledge attitude practice questionnaire score shows greater significance when compared to pre knowledge attitude practice questionnaire score and also it shows that patient counseling has a major role in disease management.*

Keywords: *Patient information leaflet (PIL), Pictogram (PIC), COPD, Knowledge Attitude Practice (KAP) questionnaire, Usefulness Assessment Questionnaire (UAQ).*

1. INTRODUCTION:

The American Thoracic Society (ATS) defines chronic obstructive pulmonary disease (COPD) as a disease state characterized by the presence of airflow obstruction due to chronic bronchitis or emphysema. The air flow obstruction is generally progressive, may be accompanied by airway hyperactivity, and may be partially reversible1 .

Chronic bronchitis is a clinical diagnosis defined by excessive secretion of bronchial mucus and is manifested by daily productive cough for 3 months or more than 2 consecutive years. It is inflammation of the lining of the bronchial tube, which carry air to and from the air sacs of the lungs. Emphysema is the condition in which the alveoli at the end of the smallest air passages of the lungs are destroyed as a result of damaging exposure to cigarette smoke and other irritating gases.

***Corresponding Author**:
Arul Prakasam. K. C, Department of pharmacy practice, JKKMMRF'S Annai JKK Sampoorani Ammal College of Pharmacy, Ethirmedu, B. Komarapalayam-638183, Namakkal District, Tamilnadu, The Tamilnadu Dr. MGR Medical University Chennai, India
Email: benytinubt91@gmail.com
Phone: 91-9842778531
DOI: doi.org/10.46978/jpr.20.9.11.1

WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 10, Issue 3, 163-178. Review Article ISSN 2277– 7105

APPROACH TO ENHANCE THE SOLUBILITY OF CARVEDILOL USING β-CD COMPLEXATION

Dr. S. Chandra*, S. Sangeetha*, S. Kavibharathi, B. Nandhini, R. Suresh and C. Sanjeevkumar

Department of Pharmaceutics, JKKMMRF's College of Pharmacy, Komarapalayam, Dr.M.G.R. Medical University.

Article Received on
21 Dec. 2020,
Revised on 11 Jan. 2021,
Accepted on 01 Feb. 2021
DOI: https://doi.org/10.17605/OSF.IO/HA8PW

***Corresponding Author**
Dr. S. Chandra and S. Sangeetha
Department of Pharmaceutics, JKKMMRF's College of Pharmacy, Komarapalayam, Dr.M.G.R. Medical University.

ABSATRACT

The poor dissolution of relatively insoluble drugs has a major pharmacokinetic problem in the oral dosage form. This limits aspects such as absorption and bioavailability. Therefore, several approaches have been followed in improving the solubility of drugs, on being complexation. Carvedilol in HPMC in water and Tween 80 in water formulates as wet and direct compression method (F1-F4) and prepared by kneading method and physical mixture evaluated and characterized by IR, XRD and DSC studies 1:3 complex exhibit higher dissolution rate in direct compression method Cyclodextrin complexation (β-CD) enhanced the absorption rate of carvedilol.

KEYWORDS: Carvedilol, HPMC, Tween 80, Cyclodextrin complexation (β-CD).

INTRODUCTION

Hypertension represents the most common cardiovascular risk factor. Its prevalence is continuously rising, affecting more than 25% of the adult population in developed societies On the other hand, several previous studies have clearly shown longitudinal associations between hypertension and coronary artery disease, myocardial infarction, stroke, congestive heart failure, and peripheral vascular disease and lowering blood pressure (BP) significantly reduces the cardiovascular morbidity and mortality However, control rates of hypertension is currently inappropriate and the majority of the hypertensive patients will require two or more antihypertensive agents to reach target BP goals.

WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 10, Issue 3, 1265-1277. Research Article ISSN 2277– 7105

FORMULATION AND EVALUVATION OF AMLODIPINE BESYLATE SOLID DISPERSION

S. Chandra*, R. Suresh*, S. Kavibharathi, S. Sangeetha, A. Sheikalisha and Hemalatha K.

Department of Pharmaceutics, JKKMMRF's College of Pharmacy, Dr. M.G.R. Medical University.

Article Received on
22 Dec. 2020,

Revised on 12 Jan. 2021,
Accepted on 02 Feb. 2021

DOI: https://doi.org/10.17605/OSF.IO/7PJRV

***Corresponding Author**
Dr. S. Chandra and R. Suresh
Department of Pharmaceutics, JKKMMRF's College of Pharmacy, Dr.M.G.R. Medical University.

ABSTRACT

Amlodipine besylate is a drug that is used for treating high blood pressure, certain types of angina and coronary heart failure. One of the major problem with this drug is its low solubility in biological fluids, which result into poor bioavailability after oral administration. The purpose of the presenting investigation was to increase the solubility and dissolution rate of Amlodipine besylate by the preparation of its solid dispersion with polyethylene glycol 6000 and hydroxyl Propyl methyl cellulose (HPMC) by using solvent evaporation method and physical mixture method in the 1:1, 1:2 and 1:3 ratio of the drug and carrier respectively. The prepared solid dispersion were characterized by FT-IR Spectroscopy no interaction of drug with carriers. The solid dispersion were evaluated for percentage practical yield, drug content and invitro dissolution study. The formulation code F3 of Amlodipine besylate solid dispersion prepared by solvent evaporation method using polyethylene glycol 6000 at 1:3 ratio drug and carrier is highest improvement in the dissolution profile, at the end of 60 minutes, formulation F3 gave the highest drug release that is 89.50%.

KEYWORDS: Solid dispersion, Amlodipine besylate, Hydroxypropyl methy cellulose, polyethylene glycol 6000, acetone and hydrochloric acid.

INTRODUCTION

Advances in combinatorial chemistry and high throughput screening have led to the development of large number of molecules with requisite pharmacological activity. However these immobilized receptor techniques lead to the selection of compounds with undesirable physicochemical attributes like high lipophilicity, poor aqueous solubility and high

WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 10, Issue 3, XXX-XXX. Review Article ISSN 2277– 7105

48

A REVIEW ON SUSTAINED RELEASE DRUG DELIVERY SYSTEM

R. Suresh*, Dr. S. Chandra*, S. Kavibharathi, A. Sheikalisha, S. Sangeetha and Raviprakash R.

Department of Pharmaceutics, JKKMMRF's College of Pharmacy, Dr. M.G.R. Medical University.

Article Received on
21 Dec. 2020,
Revised on 11 Jan. 2021,
Accepted on 01 Feb. 2021
DOI: 10.20959/wjpr20213-19685

***Corresponding Author**
R. Suresh
Department of Pharmaceutics, JKKMMRF's College of Pharmacy, Dr. M.G.R. Medical University.
sksangee93@gmail.com

ABSTRACT

Sustained release dosage forms are designed to release a drug at a predetermined rate by maintaining a constant drug level for a specific period of time with minimum side effects. The basic rationale of sustained release drug delivery system optimizes the biopharmaceutical, pharmacokinetic and pharmacodynamic properties of a drug in such a way that its utility is maximized, side-effects are reduced and cure of the disease is achieved. There are several advantages of sustained release drug delivery over conventional dosage forms like improved patient compliance due to less frequent drug administration, reduction of fluctuation in steady-state drug levels, maximum utilization of the drug, increased safety margin of potent drug, reduction in healthcare costs through improved therapy and shorter treatment period.

KEYWORDS: Sustained Release Drug Delivery System (SRDDS), Classification of SRDDS, Methods of SRDDS, Evaluation of SRDDS.

INTRODUCTION

Pharmaceutical products designed for oral delivery are mainly immediate release type conventional drug delivery systems, which are designed for immediate release of drug for rapid absorption. These immediate release dosage forms have some limitations such as: Drugs with short half-life require frequent administration, which increases chances of missing dose of drug leading to poor patient compliance. A typical peak-valley plasma concentration-time profile is obtained which makes attainment of steady state condition difficult. The unavoidable fluctuations in the drug concentration may lead to under medication or

WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 9, Issue 3, 710-721. Research Article ISSN 2277– 7105

FORMULATION CHARECTERISATION AND IN VITRO EVALUATION OF TRANSDERMAL PATCHES OF KETOPROFEN WITH DIFFERENT POLYMER CONCENTRATION

Dr. S. Chandra*, A. Sheikalisha*, Aswathy Raj S., R. Suresh, B. Nandhini and S. S. Angeetha

India.

Article Received on
30 Dec. 2019,
Revised on 20 Jan. 2020,
Accepted on 10 Feb. 2020
DOI: 10.20959/wjpr20203-16756

***Corresponding Author**
Dr. S. Chandra
India.

ABSTRACT

Transdermal drug delivery system is a new era of pharmaceutical dosage forms along with various features to provide successful drug delivery. Transdermal drug delivery system establishes itself as an integral part of novel drug delivery system. In the present study, an attempt was made to design and evaluate transdermal patches of Ketoprofen, in order to overcome first pass metabolism in GIT, drug deactivation by lever and better patient complaints and to reduce adverse effect and frequency of administration. Each of the proposed transdermal patches is composed of using different polymers, anticipating rapping drug permeation and drug release. Controlled released transdermal preparation of Ketoprofen prepared to give sustained effect as compared to conventional multiple oral dose. The patches were prepared by solvent evaporation method using polymers such as ethyl cellulose and polyvinyl pyrrolydine. The prepared patches were evaluated for thickness, weight variation, folding indurance, surface PH, tensile strength, percentage flatness, swellability, percentage moisture update, drug content uniformity, invitro permeation, in vitro drug release. In vitro drug release studies were perfomed by using USP type second apparatus (paddle method) at 50 rpm in 900 ml of 7.4 phosphate refer for 8 hour at 37+_ 0.5°C. In vitro permeation studies were franz diffusion cell apparatus with 7.4 phosphate buffer for 10 hours. Transdermal drug delivery had become an appealing and patience acceptance technology as it is minimize and avoids the limitations while comparing with conventional as well as parenteral route of drug administration such as peak and valley phenomenon i.e. exhibit fluctuation in plasma drug concentration level, pain and inconvenience of injections and the limited controlled release options of both. A transdermal patch is defined as medicated adhesive patch which is placed above the skin to