Ind. J. Pharm. Edu. Res., 2024; 58(1s):s196-s205.
https://www.ijper.org

Original Article

Self-Nanomicellar Dispersion of Rosuvastatin for Improved Bioavailability: Formulation, Optimization and Pharmacokinetic Studies

Sridevi Gowripattapu[1,2], SathisKumar Dinakaran[2], Selvamuthukumar Subramanian[1,*]

[1]Department of Pharmacy, Annamalai University, Chidambaram, Tamil Nadu, INDIA.
[2]Department of Pharmacy, Aditya Pharmacy College, Surampalem, Andhra Pradesh, INDIA.

ABSTRACT

Introduction: Rosuvastatin is a statin drug used to lower cholesterol, but it has poor water solubility and low bioavailability, limiting how effective it can be. The objective of the present study was to formulate and evaluate a SNEDDS "self-nano emulsifying drug delivery systems" of Rosuvastatin and to optimize its formulation. **Materials and Methods:** The SNEDDS was produced using Egg lecithin, Capmul MCM, and Tween 20 as co-surfactant, oil, and surfactant, respectively. The formulation was optimized by Design Expert 12 and was characterized by various techniques such as globule size, zeta potential, % transmittance, refractive index, drug release studies etc. The optimized SNEDDS was loaded with different adsorbents by adsorption using technique and characterized for *in vitro* release studies, *in vivo* drug release studies and comparison studies with pure drug. **Results:** The SNEDDS were optimized which shows a negative zeta potential of -4.32, a globule size of 42.21 nm, and a faster release compared to other formulations. Drug release studies (*in vitro*) showed that the optimized SNEDDS-loaded tablet had more rapid rate of drug release (99.9% at 40 min) when compared with the pure drug (36.73% at 40 min). The *in vivo* study in healthy rabbits showed a highest release rate of drug from the SNEDDS loaded tablet (RRSV1) when compared with the pure drug resulting in an enhanced bioavailability of Rosuvastatin. **Conclusion:** The study concludes that the SNEDDS of Rosuvastatin is a promising approach for increasing solubility, rate of dissolution and bioavailability.

Keywords: Rosuvastatin, SNEDDS, Statistical optimization, Solubility, Dissolution rate, Bioavailability.

Correspondence:
Dr. Selvamuthukumar Subramanian
Associate Professor, Department of Pharmacy, Faculty of Engineering and Technology, Annamalai University, Annamalai Nagar-608002, Tamil Nadu, INDIA.
Email: smk1976@gmail.com

Received: 26-04-2023;
Revised: 11-05-2023;
Accepted: 03-11-2023.

INTRODUCTION

Hyperlipidemia, or high blood lipid levels, is a serious and growing health concern linked to various chronic diseases.[1] Rosuvastatin is a highly effective drug for managing hyperlipidemia, but its poor water solubility limits its dissolving rate and bioavailability.[2] Improving Rosuvastatin's solubility could help optimize its therapeutic potential to treat hyperlipidemia. The objective of this study was to formulate a Self-Nanoemulsifying Drug Delivery System (SNEDDS) in order to increase the solubility, dissolution, and bioavailability of Rosuvastatin. Nanotechnology has enabled innovative advances in diagnostics, food, and drug delivery. SNEDDS are one such innovation that combines the benefits of lipid-based delivery and nanotechnology. SNEDDS is a novel drug delivery approach that overcomes the limitations of delivering Biopharmaceutics Classification System (BCS) class II drugs like Rosuvastatin, which have poor water solubility.[3,4]

This work examined whether a SNEDDS could enhance the effectiveness of Rosuvastatin for treating high cholesterol. SNEDDS formulations contain oils, surfactants, and co-surfactants that spontaneously form nano-sized emulsions when dispersed in water. The nanoemulsion can increase the concentration of a drug in the oil phase, thereby enhancing its solubility. The study hypothesized that a Rosuvastatin SNEDDS would increase its solubility and bioavailability, improving its effectiveness against hyperlipidemia.

MATERIALS AND METHODS

Materials

The study obtained Rosuvastatin from Glenmark Pharmaceuticals. It acquired the oils Capmul and Captex 200 from MCM Abitec group, and obtained the surfactants Span 20, Tween 20, Tween 80, as well as the co-surfactants Poly Ethylene Glycol (PEG) 400 and propylene glycol and the co-surfactant egg lecithin from Merck.

DOI: 10.5530/ijper.58.1s.19

Ind. J. Pharm. Edu. Res., 2024; 58(1s):s176-s186.
https://www.ijper.org

Original Article

Application of Novel Natural Sweetening Agent-Stevia in Formulation, Evaluation of Nicardipine Hydrochloride Orodispersable Tablets for Rapid Absorption

Nagasen Dasari[1,2,*], Chirravuri Satyanarayana Phani Kumar[1,2], Rama Krishna Gummadi[1,2], Sai kiran Pindiprolu[1,2], Sujiya Balla[1,2], Amala Masa[3], Lavanya pulidindi[4], Vajrapu Subhaveera Prasanth[1,2]

[1]Aditya Pharmacy College, Surampalem, Andhra Pradesh, INDIA.
[2]Jawaharlal Nehru Technological University Kakinada, Kakinada, Andhra Pradesh, INDIA.
[3]Department of Pharmacology, Krishna University College of Pharmaceutical Science and Research, Machilipatnam, Krishna, Andhra Pradesh, INDIA.
[4]Department of Horticulture, East Godavari, Andhra Pradesh, INDIA.

ABSTRACT

Objectives: The objective of this study was to develop a stable and effective form of an Orodispersible tablet containing Nicardipine Hydrochloride for the immediate treatment of high blood pressure and angina. The aim was to achieve this by using the natural sweetener stevia to improve taste. **Background:** Nicardipine Hydrochloride is used to treat high blood pressure and angina. However, currently available immediate release forms have limitations in terms of drug release and taste. Therefore, the goal was to develop an Orodispersible form of the drug that would enhance drug release and improve taste masking capabilities. **Materials and Methods:** We developed formulations of Nicardipine Hydrochloride Orodispersible tablets using the natural sweetener *Stevia rebaudiana* to enhance taste and reduce the caustic sensation. We confirmed the compatibility of the drug-excipient mixture using FTIR. Drug content and dissolution were determined through UV spectrophotometry. We also conducted organoleptic tests and other compendial specification tests. Precompression parameters were evaluated, and measures were taken to improve the flow behavior of the formulation blend by using excipients with excellent flow properties. Based on disintegration and dissolution time, we selected the F6 formulation as the optimized formula. We then subjected the developed trial to stability studies for three months, evaluating disintegration time, drug content, and dissolution. **Results:** The optimized formulation demonstrated a disintegration time of 46.2 ± 0.82 sec and a dissolution rate of 100.50±2.50. Compendial tests remained stable without any significant fluctuations after the stability study. Also, the taste of the drug was pleasant after taste. **Conclusion:** Through the appropriate selection of excipients, we successfully developed a stable and effective form of Nicardipine Hydrochloride Orodispersible tablet with enhanced drug release (using the solid dispersion technique) and improved taste masking capabilities. The optimized formulation yielded favorable results in terms of disintegration and dissolution time, drug content, and stability.

Keywords: Orodispersable tablets, *Stevia rebaudiana* FTIR, UV spectrophotometry, Angina pectoris.

Correspondence:
Mr. Nagasen Dasari
Assistant Professor, Aditya Pharmacy College, Surampalem, Kakinada-533437, Andhra Pradesh, INDIA.
Email: nagasenpharma@gmail.com

Received: 25-01-2023;
Revised: 09-02-2023;
Accepted: 03-11-2023.

INTRODUCTION

'Orodispersable Tablet' can be interpreted as "uncoated unit dosage form used for buccal or oral cavity, where it disperses prior to consumption" appears in Pharmacopoeia (European).They resolve the complications with desirable advantages associated with conventional dosage forms, and it has desired advantages like hardness, uniformity of dosage, extremely easy way of administration as no solvent is necessary for swallowing these tablets and also suitable for Upper age group (geriatric), Lower age groups (paediatric) and patients who are in travelling.[1] These tablets have impulsive rapid breakdown in the mouth upon contact with saliva, dissolution of the active ingredient, and absorption through the buccal membrane while in contact.[2] Present day, diverse novel technologies which are modern had initiated to formulate Orodispersable tablets with fascinating features, like masking the bitterness ability, low breakdown time, pleasant feel at oral cavity and sugar free tablets for diabetic patients. The modern techniques applied in construction of Orodispersable

DOI: 10.5530/ijper.58.1s.12

Journal of Chemical Health Risks
www.jchr.org
JCHR (2023) 13(6), 117-123 [ISSN:2251-6727]

Attenuation of Scopolamine-Induced Amnesia via Cholinergic Modulation in Rats by Amentoflavone Nanoparticles

Prasanthi Gnatui[*1], Nagaraju Bandaru[1], Veera Mani Deepika Perlapati[1], Sudharani Kalavala[1], Matta Sarika[1], Vallabhareddy Prasanna Sai Sree[1]

[1]Dept. of Pharmacology, Aditya Pharmacy College (Affiliated to JNTUK), Surampalem, Kakinada, AP – 533437.

[2]College of Pharmacy, Koneru Lacxmaiah Education Foundation, Vaddeswaram, Guntur, INDIA.

[3]Dept. of Pharmacy Practice, Aditya Pharmacy College (Affiliated to JNTUK), Surampalem, Kakinada, AP – 533437.

[4]Dept. of Pharmacology, Aditya Pharmacy College (Affiliated to JNTUK), Surampalem, Kakinada, AP – 533437.

[5]Dept. of Pharmaceutical Analysis, Aditya Pharmacy College (Affiliated to JNTUK), Surampalem, Kakinada, AP – 533437.

[6]Dept. of Pharmaceutics, Aditya Pharmacy College (Affiliated to JNTUK), Surampalem, Kakinada, AP – 533437.

(Received: 07 October 2023 Revised: 12 November Accepted: 06 December)

KEYWORDS

Nanoparticle, dementia, flavonoid, Amentoflavone, bioavailability, neurodegenerative.

ABSTRACT:

Amentoflavone is a well-known flavonoid and has low bioavailability. Nanoparticles of Amentoflavone (NAF) enhance their bioavailability. NAF was not explored for its potential therapeutic activities in Alzheimer's disease (AD). Hence, the present study was performed to evaluate the protective effect of NAF in comparison to free Amentoflavone against scopolamine-induced spatial memory impairments. NAF prepared by anti-solvent precipitation method. Amentoflavone, NAF (50 mg/kg p.o.), and rivastigmine (2 mg/kg i.p.) as a reference drug were administered for 8 consecutive days. At the end of the treatment period, memory impairments were induced by a single injection of scopolamine (20 mg/kg; i.p.). Conditioned avoidance and rectangular-maze tests were conducted 30 min thereafter then rats were sacrificed, and brain homogenates were used for the estimation of glutathione (GSH), catalase, and malondialdehyde (MDA) contents together with acetylcholinesterase (AchE) activity. In addition, histopathologic studies were also performed. The size of NAF was observed below 300 nm. NAF significantly reduced the transfer latency and conditioned avoidance response compared to the scopolamine-treated group ($p < 0.05$). Pre-treatment with NAF showed a significant ($p < 0.05$) decrease in MDA, and AchE levels, and an increase in brain catalase and GSH levels to be similar to that observed in the rivastigmine group. In all the behavioral, biochemical, and histological experiments, the rats treated with NAF showed additional distinguished results compared to the quercetin group indicating that a preventive strategy against the progression of AD. This approach of NAF provides the potential therapeutic application in human neurodegenerative disease in the future.

I. Introduction

Alzheimer's disease (AD) is a chronic neurodegenerative disorder with progressive memory decline [1]. AD is characterized by cerebral oxidative stress accompanied by loss of cholinergic neurons in the basal forebrain and hippocampus [2,3]. Central cholinergic neuronal activity plays an important role in learning and memory [4]. Multiple neurotransmitters and neuronal pathways are involved in the process of memory formation [5]. Functional deficits in the cholinergic system are associated with cognitive impairments observed in AD [6]. Scopolamine, a muscarinic cholinergic receptor antagonist has profound amnesic effects in experimental animals. Scopolamine-induced amnesia has been widely adopted in the experimental animal model to screen for

Discover Nano

Review

Targeting triple negative breast cancer stem cells using nanocarriers

Nagasen Dasari[1,2,3] · Girija Sankar Guntuku[1] · Sai Kiran S. S. Pindiprolu[2,3]

Received: 11 October 2023 / Accepted: 27 February 2024
Published online: 07 March 2024

Abstract
Breast cancer is a complex and heterogeneous disease, encompassing various subtypes characterized by distinct molecular features, clinical behaviors, and treatment responses. Categorization of subtypes is based on the presence or absence of estrogen receptor (ER), progesterone receptor (PR), and human epidermal growth factor receptor 2 (HER2), leading to subtypes such as luminal A, luminal B, HER2-positive, and triple-negative breast cancer (TNBC). TNBC, comprising around 20% of all breast cancers, lacks expression of ER, PR, and HER2 receptors, rendering it unresponsive to targeted therapies and presenting significant challenges in treatment. TNBC is associated with aggressive behavior, high rates of recurrence, and resistance to chemotherapy. Tumor initiation, progression, and treatment resistance in TNBC are attributed to breast cancer stem cells (BCSCs), which possess self-renewal, differentiation, and tumorigenic potential. Surface markers, self-renewal pathways (Notch, Wnt, Hedgehog signaling), apoptotic protein (Bcl-2), angiogenesis inhibition (VEGF inhibitors), and immune modulation (cytokines, immune checkpoint inhibitors) are among the key targets discussed in this review. However, targeting the BCSC subpopulation in TNBC presents challenges, including off-target effects, low solubility, and bioavailability of anti-BCSC agents. Nanoparticle-based therapies offer a promising approach to target various molecular pathways and cellular processes implicated in survival of BSCS in TNBC. In this review, we explore various nanocarrier-based approaches for targeting BCSCs in TNBC, aiming to overcome these challenges and improve treatment outcomes for TNBC patients. These nanoparticle-based therapeutic strategies hold promise for addressing the therapeutic gap in TNBC treatment by delivering targeted therapies to BCSCs while minimizing systemic toxicity and enhancing treatment efficacy.

Keywords Breast cancer stem cells · Molecular targets · Nano carriers · Anti-BSCS agents

1 Introduction

Breast cancer is a common and highly prevalent cancer subtype globally according to world health organization [1–3]. Breast cancer has been identified as a significant contribution to mortality rates trailing closely behind lung cancer. Based on the most recent data available around 2.5 million women were diagnosed with breast cancer annually resulting in approximately 685,000 deaths world-wide [4].

TNBC constitute around 20% among all breast cancer cases and it is characterized by the absence of ER, PR, and HER2 receptors. It presents a highly aggressive phenotype, tends to metastasize more, and frequently acquires resistance to chemotherapy. As per reports in 2023, a substantial number of cases of TNBC were recorded, reaching approximately

✉ Nagasen Dasari, nagasenpharma@gmail.com | [1]Andhra University College of Pharmaceutical Sciences, Andhra University, Vishakhapatnam, Andhra Pradesh, India. [2]Aditya Pharmacy College, Surampalem, Andhra Pradesh, India. [3]Jawaharlal Nehru Technological University, Kakinada, Andhra Pradesh, India.

IJBPAS, October, 2023, 12(10): 4818-4827

ISSN: 2277–4998

International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)

'A Bridge between Laboratory and Market'

www.ijbpas.com

IN VITRO AND *IN VIVO* PHARMACOKINETIC ASSESSMENT OF OPTIMIZED PITAVASTATIN SOLID-SNEDDS

SRIDEVI GOWRIPATTAPU [1,2] AND SELVAMUTHUKUMAR S[2*]

1: Aditya Pharmacy College, Surampalem - 533437, Andhra Pradesh, India

2: Department of Pharmacy, Annamalai University, Chidambaram - 608002, Tamilnadu, India

*Corresponding Author: Dr. S. Selvamuthukumar: E Mail: smk1976@gmail.com

Received 10th July 2023; Revised 6th Aug. 2023; Accepted 11th Sept. 2023; Available online 1st Oct. 2023

https://doi.org/10.31032/IJBPAS/2023/12.10.7522

ABSTRACT

In the present research work animal model studies were performed to determine gastrointestinal (GI) absorption and elimination rate of pitavastatin. The *in vitro* evaluation of the prepared solid-snedds release of pitavastatin with the selected oils (labrafac lipophilew1349, capmul MCM), surfactants (tween 80), co surfactants (egg lecithin) confirmed the usefulness compared to the remaining oils, Surfactants and co surfactants for the drug that are selected. From the *in vivo* evaluation studies of optimized formulation, the results are as follows: peak plasma concentration (C_{max}) of the pure pitavastatin and RPTV1 (rabbit dose optimized pitavastatin) were 524 ± 6.49 ng/ml and 469.9 ± 12.09 ng/ml. Time required to extend maximal concentration (T_{max}) in case of formulation (RPTV1) was increased from 1 to 2 h in comparison to pure drug Pitavastatin, AUC_{0-t} was found to be 912.93 ± 1.80 ng.h/ml and 2982.5 ± 0.74 ng.h/ml for pure pitavastatin and formulation RPTV1. For pitavastatin and formulation (RPTV1) elimination rate constant was observed that 0.680 ± 0.001 h^{-1} and 0.560 ± 0.0007 h^{-1}. The $t_{1/2}$ for pure pitavastatin was found to be 1.02 ± 0.007 h and 1.23 ± 0.01 h for RPTV1. Drug releases from the tablet (RPTV1) were increased in comparison with the pure drug in rabbit shows that drug plasma levels maintained up to 12 h. Thus it indicates that improved bioavailability of optimized s-snedds (solid self nano emulsifying drug delivery systems).

Keywords: Pitavastatin, S-snedds, C_{max}, AUC, K_{el}, Bioavailability

INNOVARE ACADEMIC SCIENCES

International Journal of Applied Pharmaceutics

ISSN- 0975-7058 Vol 15, Issue 6, 2023

Short Communication

TARGETING ANGIOGENESIS WITH FLUPHENAZINE-ZINC OXIDE NANOCONJUGATES: A POTENTIAL MECHANISM FOR IMPROVING ANTIPSYCHOTIC EFFICACY

NAGASEN DASARI, SUJIYA BALLA, PYDIRAJU KONDRAPU, RAMAKRISHNA GUMMADI, NOOKARAJU SURADA, UMA MAHESWARI KONDRU, SAI KIRAN S. S. PINDIPROLU

Aditya Pharmacy College, Surampalem-533437, Andhra Pradesh, India. Jawaharlal Nehru Technological University Kakinada, Kakinada, Andhra Pradesh, India

Corresponding author: Sai Kiran S. S. Pindiprolu; Email: [illegible]@gmail.com

Received: 28 May 2023, Revised and Accepted: 03 Jul 2023

ABSTRACT

Objective: This study aimed to develop a more effective formulation of Fluphenazine (FLP) for the management of psychosis. Antipsychotics are widely used for the treatment of severe mental disorders such as schizophrenia and bipolar disorder. However, their clinical use is limited due to various side effects and low efficacy in a large number of patients. Nanoparticle-based drug delivery systems have shown great potential in improving the pharmacokinetics and pharmacodynamics of various drugs, including antipsychotics. Zinc oxide nanoparticles (ZnO NPs) have emerged as a promising carrier for drug delivery due to their unique physicochemical properties, biocompatibility, and low toxicity.

Methods: In this study, we reported the preparation and characterization of FLU-encapsulated ZnO NPs (FLU-ZnO-NPs) for the management of psychosis. The synthesized FLU-ZnO-NPs were characterized using various techniques, such as X-Ray Diffractometer, Energy Dispersive X-Ray analysis, Transmission Electron Microscopy and Zetasizer (Malvern).

Results: The characterization results showed that the synthesized FLU-ZnO-NPs had improved solubility, enhanced bioavailability, targeted delivery, and reduced toxicity.

Conclusion: The development of FLU-ZnO-NPs could provide a more effective and safe treatment option for patients with mental disorders.

Keywords: Antipsychotics, Fluphenazine, Zinc oxide nanoparticles, Psychosis, Drug delivery systems

[illegible]

Aditya Pharmacy College
SURAMPALEM-533 437

JAZ INDIA

Journal of Advanced Zoology

ISSN: 0253-7214
Volume 45 Issue 1 Year 2024 Page 332-338

From Inaccuracy to Insight: Identifying Medication Discrepancies through Observational Reconciliation at a Tertiary Care Hospital, Bhimavaram of Andhra Pradesh

Dr. Pavan Kumar Yanamadala*[1], Akhilandeswari Gedela[2], Ramya Satya Sri Nirjogi[3], Keerthana Gopidalai[4], Mani Sai Yalagandula[5], Jessica Akumarthi[6], Bhargavi Katta[7]

[1*]*Associate Professor in the Dept. of Pharmacy Practice at Aditya Pharmacy College (A), Surampalem-533437, Andhra Pradesh, India*

[2,3,5,7]*Students of Pharm. D at Shri Vishnu College of Pharmacy, Bhimavaram-534201, Andhra Pradesh, India*

[4,6]*Students of Pharm. D at Viswanadha Institute of Pharmaceutical Sciences, Sontyam-531173, Andhra Pradesh, India*

***Corresponding Author:** Dr. Pavan Kumar Yanamadala*
Department of Pharmacy Practice, Aditya Pharmacy College (A), Surampalem-533437 Andhra Pradesh, India Email: pavan.yanamadala@gmail.com Ph.: +91 9441496543

Abstract

Background: Medication reconciliation is the process of examining the patient's entire medication regimen at the time of admission, transfer, and discharge and comparing it with the regimen being considered for the new setting of care. This helps to prevent unintentional inconsistencies across transitions in medical care. Medication reconciliation protects patients from medication side effects while ensuring that they receive standard care. It serves as the baseline from which therapeutic interventions are developed, drug treatment is continued upon admission, and self-care is continued upon release.
Objectives: Determining the frequency and kinds of discrepancies discovered during medication reconciliation was the main goal of this study. Determining the effect of medication reconciliation to assess the possible seriousness of medication inconsistencies and ascertain the drug's role in medication errors was the secondary goal.
Methodology: In the inpatient units of a tertiary care hospital in the West Godavari District, a prospective, observational study on medication reconciliation was conducted for six months. Results: Of the 385 patients that made up this study, 224 (58.18%) were males and 161 (41.8%) were females. In 169 (43.89%) of the patients, medication discrepancies were detected. There were inconsistencies discovered at several transition points: 50 disparities were detected at admission, 50 during the transfer phase, and 17 on the discharge. **Conclusion:** A multi-centric assessment including parameters like the percentage of inpatients encountering at least one major medication error would be intriguing. This may support the idea that drug reconciliation is crucial for patient safety.

Journal of Advanced Zoology
ISSN: 0253-7214
Volume 45 Issue 1 Year 2024 Page 413-419

Understanding The Role Of Health Literacy In Self-Medication: Findings From A Cross-Sectional Study In West Godavari District Of Andhra Pradesh

Sri Krishna Veni Balla[1], Dr. Pavan Kumar Yanamadala*[2], Rupa Lavanya Gogulamanda[3], Manjusha Eduresi[4], Nandini Palivela[5], Hepsibha Nagabathula[6], K. L. N. S. Srisurya[7], Durga Bhavani Danduprolu[8]

[1] *Student of Pharm. D at Aditya Pharmacy College, Surampalem-533437, Andhra Pradesh, India*
[2*] *Associate Professor at Aditya Pharmacy College, Surampalem-533437, Andhra Pradesh, India*
[3, 5] *Interns of Pharm. D at Aditya Pharmacy College, Surampalem-533437, Andhra Pradesh, India*
[4] *Student at Andhra University College of Pharmaceutical Sciences, Visakhapatnam, Andhra Pradesh, India*
[6, 8] *Interns of Pharm. D at GIET School of Pharmacy, Rajahmundry-533296, Andhra Pradesh, India*
[7] *Student of Pharm. D at Viswanadha Institute of Pharmaceutical Sciences, Sontyam-531173, Andhra Pradesh, India*

*Correspanding Author: Dr. Pavan Kumar Yanamadala
Associate Professor in the Department of Pharmacy Practice, Aditya Pharmacy College (A), Surampalem-533437, Andhra Pradesh, India Email: pavan.yanamadala@gmail.com Ph : +91 9441496543

Abstract

Background: Self-medication is the practice of treating any ailment or symptom that a person diagnoses for themselves without first visiting a physician. Different communities display different behaviours; hence the purpose of this study is to statistically investigate the patterns and prevalence of self-medication usage. Although health literacy practices have been increasingly recommended in public health literature, there is a lack of studies that examine the relationships between health literacy and self-medication.

Methodology: A quantitative, descriptive, cross-sectional, community-based research approach was used in a sample of 316 participants. Health literacy was measured by Single Item Literacy Screener. Data was analysed using SPSS 29.0 version.

Results: A total of 316 participants agreed to participate (63.9% were females). The results showed that more than half, 53.4% had adequate health literacy. The prevalence of self-medication was 74%, in these 52% had used medicines by previous prescription and 8% used alternative medicine. There was a significant relationship between the overall health literacy level and practice of self-medication.

Conclusion: Improving the health literacy level of the public can reduce inappropriate self-medication. Therefore, the design and implementation of training programs are necessary to increase the perception on the risk of self-medication. Appropriate reading skills are important for accessing health information, using health care services, and achieving desirable health outcomes.

Keywords: Self -medication, health literacy, single item health literacy screener, Self-Medication, Medication Adherence, Rural Population

Journal of Drug Delivery Science and Technology 86 (2023) 104617

Contents lists available at ScienceDirect

Journal of Drug Delivery Science and Technology

journal homepage: www.elsevier.com/locate/jddst

Review article

Therapeutic targeting of aberrant sialylation for prevention of chemoresistance and metastasis in triple negative breast cancer

Sai Kiran S.S. Pindiprolu[a,b,*], Jitender Madhan[c], Dadi A. Srinivasarao[c], Nagasen Dasari[a,b], Chirravuri. S. Phani Kumar[a,b], Chantibabu Katta[c], Vaskuri G.S. Sainaga Jyothi[c]

[a] Aditya Pharmacy College, Surampalem, 533 437, Andhra Pradesh, India
[b] Jawaharlal Nehru Technological University, Kakinada, Andhra Pradesh, India
[c] National Institute of Pharmaceutical Education and Research, Balanagar, Hyderabad, India

ARTICLE INFO

Keywords:
Sialic acid
Sialylation
Fluorosialic acid
Triple negative breast cancer
Nanocarriers
Targeted drug delivery

ABSTRACT

Triple Negative Breast Cancer (TNBC) is a challenging and aggressive form of breast cancer that is difficult to treat due to its high rates of tumor relapse, metastasis, chemoresistance and lack of targeted therapies. Nanocarrier-based therapies hold promise in TNBC treatment as they can deliver therapeutic agents specifically to cancer cells with increased bioavailability and efficacy. One promising approach is targeting sialylation, a process that adds sialic acid residues to growing glycan chains of glycoproteins and glycolipids. Aberrant sialylation has been linked to the survival of Breast Cancer Stem Cells (BCSCs) and the occurrence of Epithelial-Mesenchymal Transition (EMT) in TNBC. Inhibiting sialylation may therefore offer a way to eliminate BCSCs and prevent EMT, leading to a more effective TNBC treatment. However, current therapeutic strategies for inhibiting sialylation have limitations, such as off-target effects, low bioavailability and stability. Nanocarrier-based approaches can overcome these limitations by precisely delivering therapeutic agents to their target sites. In this review, we discuss various nanotechnology-based approaches for targeting abnormal sialylation to eliminate BCSCs and inhibit EMT in TNBC.

1. Introduction

Triple negative breast cancer (TNBC) is a subtype of breast cancer that is characterized by the absence of estrogen receptor (ER), progesterone receptor (PR) and human epidermal growth factor receptor 2 (HER-2) receptors [1]. TNBC is highly aggressive subtype of breast cancers. The treatment of TNBC is challenging as traditional hormone therapies and targeted therapies are not effective. TNBC is associated with a high rate of tumor recurrence, chemoresistance and metastasis [2–4]. Recent studies have suggested that a small population of tumor-initiating cells called breast cancer stem cells (BCSCs) may be responsible for the chemoresistance, tumor relapse and metastasis seen in TNBC [5]. BCSCs promote the process of Epithelial mesenchymal transition (EMT), a phenomenon by which epithelial cells are converted into mesenchymal cells (responsible for metastasis). Compelling body of evidences suggest, the presence of BCSCs is the major factor for high rates of metastasis and tumor relapse of TNBC [6–9]. There is a need, therefore, for identification of molecular targets for eradication of BCSCs along with bulk tumor cells in TNBC (see Fig. 1).

One promising therapeutic strategy is the inhibition of sialylation, a process by which sialic acid residues are added to growing glycan chains of glycoproteins and glycolipids. Aberrant sialylation has been linked to the survival of BCSCs and the occurrence of EMT in TNBC. Targeting sialylation may therefore provide a way to eliminate BCSCs and prevent EMT, leading to a more effective treatment for TNBC [10–12]. There are various therapeutic strategies for inhibiting sialylation in cancer, including the use of small molecules, nucleic acids, and antibodies. However, these strategies are limited by their off-target effects, low bioavailability and stability.

Nanotechnology based carriers (nanocarriers) can be used to overcome these limitations by precisely delivering therapeutic agents to their target sites, resulting in improved bioavailability and therapeutic efficacy [13–18]. In recent years researchers have focused on development of surface modified nanocarriers for targeted delivery of drugs and imaging agents to tumor cells [19,20]. For instance, Hongjun Wu et al. developed a folate-targeted polymersome that integrates ammonium

* Corresponding author. Aditya Pharmacy College, Surampalem, 533 437, Andhra Pradesh, India.
E-mail address: pindiprolusskiran@gmail.com (S.K.S.S. Pindiprolu).

https://doi.org/10.1016/j.jddst.2023.104617
Received 27 February 2023; Received in revised form 21 May 2023; Accepted 27 May 2023
Available online 14 June 2023

IJCBS, 24(4) (2023): 395-400

International Journal of Chemical and Biochemical Sciences
(ISSN 2226-9614)

Journal Home page: www.iscientific.org/Journal.html

© International Scientific Organization

Pharmacoeconomic Analysis of Biologic vs. Biosimilar Therapies in Rheumatoid Arthritis

Shaik Aminabee[1], Santhi Krupa Dasari[2], K. Hanumanth Rao[2], V. Sirisha[2], V. Anitha Kumari[3], Nagasen Dasari[4], Balla Sujiya[4], T.S. Leelavati[5]*

[1]*V. V. Institute of Pharmaceutical Sciences, Gudlavalleru-521356, Krishna District, Andhra Pradesh, India*

[2]*Krishna University, College of Pharmaceutical Sciences and Research, Machilipatnam, Krishna District, Andhra Pradesh, India*

[3]*Sir CR Reddy College of Pharmaceutical Sciences, Eluru, Andhra Pradesh, India*

[4]*Aditya Pharmacy College, Surampalem, Andhra Pradesh and Jawaharlal Nehru Technological University Kakinada, Andhra Pradesh, India*

[5]*Department of Business and Management Studies, SR Gudlavalleru Engineering College, Gudlavalleru-521356, Krishna District, Andhra Pradesh, India*

Abstract

Rheumatoid Arthritis (RA) is a chronic autoimmune disease that imposes a substantial economic burden on healthcare systems and adversely affects the quality of life of affected individuals. Biologic therapies have revolutionized RA management but come with high costs. Biosimilar therapies have emerged as potential cost-saving alternatives. This pharmacoeconomic analysis aimed to compare the clinical effectiveness and cost-effectiveness of biologic and biosimilar therapies in RA. The study found that both treatment modalities significantly improved disease activity and health-related quality of life. The cost-effectiveness analysis revealed a favorable incremental cost-effectiveness ratio (ICER) for biologic therapy compared to biosimilar therapy, indicating cost-effectiveness within acceptable thresholds. These findings have implications for clinical practice and healthcare policy, highlighting the viability of biosimilars as effective and economically sound alternatives in RA management.

Keywords: Rheumatoid Arthritis, Biologic, Biosimilar, Cost-Effectiveness, Quality-Adjusted Life Years (QALYs), Disease Activity, Incremental Cost-Effectiveness Ratio (ICER)

Full-length article **Corresponding Author*, e-mail: *aminaamani786@gmail.com*

1. Introduction

Rheumatoid Arthritis (RA) is a chronic autoimmune disorder that affects millions of individuals worldwide, leading to joint pain, inflammation, and functional disability. Over the past two decades, significant advancements in the treatment of RA have emerged, revolutionizing the management of this debilitating disease. Biologic Disease-Modifying Antirheumatic Drugs (DMARDs) have played a pivotal role in improving the outcomes and quality of life for RA patients, offering substantial therapeutic benefits [1-2]. However, alongside these remarkable therapeutic gains, concerns regarding the economic burden of biologic therapies have come to the forefront. The high costs associated with biologic DMARDs have strained healthcare budgets, limiting access to these life-changing treatments for many patients. This financial challenge has driven the development and adoption of biosimilar therapies – biologic agents that are highly similar to their reference products, offering potential cost savings without compromising efficacy and safety.

The choice between biologic and biosimilar therapies in RA treatment presents a complex dilemma for clinicians, patients, and healthcare decision-makers. While biosimilars hold the promise of reducing the economic impact of RA treatment, questions persist regarding their cost-effectiveness and long-term outcomes compared to originator biologics. In this context, pharmacoeconomic analysis emerges as a critical tool for evaluating the economic and clinical implications of these therapeutic choices. This research endeavors to conduct a comprehensive pharmacoeconomic analysis to address the following key questions:

- What are the cost-effectiveness profiles of biologic and biosimilar therapies in the treatment of RA?
- How do these therapies impact the quality of life and long-term outcomes of RA patients?
- What are the potential clinical and policy implications of the findings for healthcare providers and policymakers?

This study seeks to provide valuable insights into the economic considerations surrounding biologic and biosimilar therapies in RA treatment, shedding light on the balance between therapeutic effectiveness and financial

Cancer Letters 588 (2024) 216792

Contents lists available at ScienceDirect

Cancer Letters

journal homepage: www.elsevier.com/locate/canlet

Conquering chemoresistance in pancreatic cancer: Exploring novel drug therapies and delivery approaches amidst desmoplasia and hypoxia

Pavan Kumar Chintamaneni [a,1], Sai Kiran S.S. Pindiprolu [b,1], Swati Swagatika Swain [c], Veera Venkata Satyanarayana Reddy Karri [c], Jerry Nesamony [d], Selvam Chelliah [e], Mahendran Bhaskaran [d,*]

[a] Department of Pharmaceutics, GITAM School of Pharmacy, GITAM (Deemed to be University), Rudraram, 502329 Telangana, India
[b] Aditya Pharmacy College, Surampalem, 533437, Andhra Pradesh, India
[c] Department of Pharmaceutics, JSS College of Pharmacy, JSS Academy of Higher Education & Research, Ooty, Nilgiris, Tamil Nadu, India
[d] College of Pharmacy and Pharmaceutical Sciences, The University of Toledo HSC, 3000 Arlington Avenue, Toledo, OH, 43614, USA
[e] College of Pharmacy and Health Sciences, Texas Southern University, Houston, TX 77004, USA

ARTICLE INFO

Keywords:
Pancreatic cancer
Chemoresistance
Desmoplasia
Hypoxia
Emerging medications
Drug delivery systems

ABSTRACT

Pancreatic cancer poses a significant challenge within the field of oncology due to its aggressive behaviour, limited treatment choices, and unfavourable outlook. With a mere 10% survival rate at the 5-year mark, finding effective interventions becomes even more pressing. The intricate relationship between desmoplasia and hypoxia in the tumor microenvironment further complicates matters by promoting resistance to chemotherapy and impeding treatment efficacy. The dense extracellular matrix and cancer-associated fibroblasts characteristic of desmoplasia create a physical and biochemical barrier that impedes drug penetration and fosters an immunosuppressive milieu. Concurrently, hypoxia nurtures aggressive tumor behaviour and resistance to conventional therapies. a comprehensive exploration of emerging medications and innovative drug delivery approaches. Notably, advancements in nanoparticle-based delivery systems, local drug delivery implants, and oxygen-carrying strategies are highlighted for their potential to enhance drug accessibility and therapeutic outcomes. The integration of these strategies with traditional chemotherapies and targeted agents reveals the potential for synergistic effects that amplify treatment responses. These emerging interventions can mitigate desmoplasia and hypoxia-induced barriers, leading to improved drug delivery, treatment efficacy, and patient outcomes in pancreatic cancer. This review article delves into the dynamic landscape of emerging anticancer medications and innovative drug delivery strategies poised to overcome the challenges imposed by desmoplasia and hypoxia in the treatment of pancreatic cancer.

1. Introduction

Pancreatic cancer (PC) is an aggressive solid tumor with higher rates of tumor relapse, metastasis and chemoresistance. PC is one of the leading causes of cancer-related deaths worldwide, with approximately 330,000 deaths per year. PC is a type of cancer that starts in the pancreas, a large gland in the abdomen. It can be broadly categorized into exocrine and endocrine types, with adenocarcinoma being the predominant subtype. The overall 5-year survival rate for PC is 6%, and shows a poor prognosis, highlighting the aggressive nature of this disease and the limited success of current treatment approaches [1,2]. It is a devastating form of gastrointestinal cancer that presents significant challenges in early diagnosis and treatment. The lack of clinical symptoms in the early stages of PC, makes it difficult to detectPC, leading to a late-stage diagnosis in the majority of cases [3,4]. In addition, PCPCPCPC often presents with tumours that are located in anatomically challenging locations, making surgical resection difficult or impossible. PCFurther, resistance to chemotherapy or radiation and lack of specific targeted therapies PChindered substantial advancements in treatment outcomes of PC. Furthermore, the silent nature of PC plays a significant

* Corresponding author. College of Pharmacy and Pharmaceutical Sciences, University of Toledo Health Science Campus, 3000 Arlington Avenue, Toledo, OH, 43614, USA.
E-mail addresses: pchintam@gitam.edu (P.K. Chintamaneni), pindiprolusaikiran@gmail.com (S.K.S.S. Pindiprolu), [illegible] (M. Bhaskaran).
[1] These authors contributed equally and share first authorship.

https://doi.org/10.1016/j.canlet.2024.216792
Received 28 September 2023; Received in revised form 20 February 2024; Accepted 3 March 2024
Available online 6 March 2024

Original Article

Application of Novel Natural Sweetening Agent-Stevia in Formulation, Evaluation of Nicardipine Hydrochloride Orodispersable Tablets for Rapid Absorption

Nagasen Dasari[1,2,*], Chirravuri Satyanarayana Phani Kumar[1,2], Rama Krishna Gummadi[1,2], Sai kiran Pindiprolu[1,2], Sujiya Balla[1,2], Amala Masa[3], Lavanya pulidindi[4], Vajrapu Subhaveera Prasanth[1,2]

[1]Aditya Pharmacy College, Surampalem, Andhra Pradesh, INDIA.
[2]Jawaharlal Nehru Technological University Kakinada, Kakinada, Andhra Pradesh, INDIA.
[3]Department of Pharmacology, Krishna University College of Pharmaceutical Science and Research, Machilipatnam, Krishna, Andhra Pradesh, INDIA.
[4]Department of Horticulture, East Godavari, Andhra Pradesh, INDIA.

ABSTRACT

Objectives: The objective of this study was to develop a stable and effective form of an Orodispersible tablet containing Nicardipine Hydrochloride for the immediate treatment of high blood pressure and angina. The aim was to achieve this by using the natural sweetener stevia to improve taste. **Background:** Nicardipine Hydrochloride is used to treat high blood pressure and angina. However, currently available immediate release forms have limitations in terms of drug release and taste. Therefore, the goal was to develop an Orodispersible form of the drug that would enhance drug release and improve taste masking capabilities. **Materials and Methods:** We developed formulations of Nicardipine Hydrochloride Orodispersible tablets using the natural sweetener *Stevia rebaudiana* to enhance taste and reduce the caustic sensation. We confirmed the compatibility of the drug-excipient mixture using FTIR. Drug content and dissolution were determined through UV spectrophotometry. We also conducted organoleptic tests and other compendial specification tests. Precompression parameters were evaluated, and measures were taken to improve the flow behavior of the formulation blend by using excipients with excellent flow properties. Based on disintegration and dissolution time, we selected the F6 formulation as the optimized formula. We then subjected the developed trial to stability studies for three months, evaluating disintegration time, drug content, and dissolution. **Results:** The optimized formulation demonstrated a disintegration time of 46.25±0.85 sec and a dissolution rate of 100.50±2.50. Compendial tests remained stable without any significant fluctuations after the stability study. Also, the taste of the drug was pleasant after taste. **Conclusion:** Through the appropriate selection of excipients, we successfully developed a stable and effective form of Nicardipine Hydrochloride Orodispersible tablet with enhanced drug release (using the solid dispersion technique) and improved taste masking capabilities. The optimized formulation yielded favorable results in terms of disintegration and dissolution time, drug content, and stability.

Keywords: Orodispersable tablets, *Stevia rebaudiana* FTIR, UV spectrophotometry, Angina pectoris.

Correspondence:
Mr. Nagasen Dasari
Assistant Professor, Aditya Pharmacy College, Surampalem, Kakinada-533437, Andhra Pradesh, INDIA.
Email: nagasenpharma@gmail.com

Received: 25-01-2023;
Revised: 09-02-2023;
Accepted: 03-11-2023.

INTRODUCTION

'Orodispersable Tablet' can be interpreted as "uncoated unit dosage form used for buccal or oral cavity, where it disperses prior to consumption" appears in Pharmacopoeia (European).They resolve the complications with desirable advantages associated with conventional dosage forms, and it has desired advantages like hardness, uniformity of dosage, extremely easy way of administration as no solvent is necessary for swallowing these tablets and also suitable for Upper age group (geriatric), Lower age groups (paediatric) and patients who are in travelling.[1] These tablets have impulsive rapid breakdown in the mouth upon contact with saliva, dissolution of the active ingredient, and absorption through the buccal membrane while in contact.[2] Present day, diverse novel technologies which are modern had initiated to formulate Orodispersable tablets with fascinating features, like masking the bitterness ability, low breakdown time, pleasant feel at oral cavity and sugar free tablets for diabetic patients. The modern techniques applied in construction of Orodispersable

DOI: 10.5530/ijper.58.1s.17

Self-Nanomicellar Dispersion of Rosuvastatin for Improved Bioavailability: Formulation, Optimization and Pharmacokinetic Studies

Sridevi Gowripattapu[1,2], SathisKumar Dinakaran[2], Selvamuthukumar Subramanian[1,*]

[1]Department of Pharmacy, Annamalai University, Chidambaram, Tamil Nadu, INDIA.
[2]Department of Pharmacy, Aditya Pharmacy College, Surampalem, Andhra Pradesh, INDIA.

ABSTRACT

Introduction: Rosuvastatin is a statin drug used to lower cholesterol, but it has poor water solubility and low bioavailability, limiting how effective it can be. The objective of the present study was to formulate and evaluate a SNEDDS "self-nano emulsifying drug delivery systems" of Rosuvastatin and to optimize its formulation. **Materials and Methods:** The SNEDDS was produced using Egg lecithin, Capmul MCM, and Tween 20 as co-surfactant, oil, and surfactant, respectively. The formulation was optimized by Design Expert 13 and was characterized by various techniques such as globule size, zeta potential, % transmittance, refractive index, drug release studies etc. The optimized SNEDDS was loaded with different adsorbents by adsorption technique and characterized for in-vitro release studies, in-vivo drug release studies and comparison studies with pure drug. **Results:** The SNEDDS were optimized which shown a negative zeta potential of -4.12, a globule size of 42.21 nm, and a faster release compared to other formulations. Drug release studies in-vitro showed that the optimized SNEDDS-loaded tablet had more rapid rate of drug release (95.9%) at 60 min when compared with the pure drug (36.11% at 60 min). The in-vivo studies in healthy rabbits showed a higher release rate of drug from the SNEDDS loaded tablet (95%) when compared with the pure drug resulting in an enhanced bioavailability of Rosuvastatin. **Conclusion:** The study concludes that the SNEDDS of Rosuvastatin is a promising approach for increasing solubility, rate of dissolution and bioavailability.

Keywords: Rosuvastatin, SNEDDS, Statistical optimization, Solubility, Dissolution rate, Bioavailability.

Correspondence:
Dr. Selvamuthukumar Subramanian
Associate Professor, Department of Pharmacy, Faculty of Engineering and Technology, Annamalai University, Annamalai Nagar-608002, Tamil Nadu, INDIA.
Email: [illegible]

Received: 26-04-2023;
Revised: 11-05-2023;
Accepted: 03-11-2023.

INTRODUCTION

Hyperlipidemia, or high blood lipid levels, is a serious and growing health concern linked to various chronic diseases.[1] Rosuvastatin is a highly effective drug for managing hyperlipidemia, but its poor water solubility limits its dissolving rate and bioavailability.[2] Improving Rosuvastatin's solubility could help optimize its therapeutic potential to treat hyperlipidemia. The objective of this study was to formulate a Self-Nanoemulsifying Drug Delivery System (SNEDDS) in order to increase the solubility, dissolution, and bioavailability of Rosuvastatin. Nanotechnology has enabled innovative advances in diagnostics, food, and drug delivery. SNEDDS are one such innovation that combines the benefits of lipid-based delivery and nanotechnology. SNEDDS is a novel drug delivery approach that overcomes the limitations of delivering Biopharmaceutics Classification System (BCS) class II drugs like Rosuvastatin, which have poor water solubility.[3]

This work examined whether a SNEDDS could enhance the effectiveness of Rosuvastatin for treating high cholesterol. SNEDDS formulations contain oils, surfactants, and co-surfactants that spontaneously form nano-sized emulsions when dispersed in water. The nanoemulsions can increase the concentration of a drug in the oil phase, thereby enhancing its solubility. The study hypothesized that a Rosuvastatin SNEDDS would increase its solubility and bioavailability, improving its effectiveness against hyperlipidemia.

MATERIALS AND METHODS

Materials

The study obtained Rosuvastatin from Glenmark Pharmaceuticals. It acquired the oils Capmul and Captex 200 from MCM Abitec group and obtained the surfactants Span 20, Tween 20, Tween 80 as well as the co-surfactants Poly Ethylene Glycol (PEG) 400 and propylene glycol and the co-surfactant egg lecithin from Merck.

DOI: 10.5530/ijper.58.1s.19

Ind. J. Pharm. Edu. Res., 2024; 58(1s):s196-s205.
https://www.ijper.org

Original Article

Self-Nanomicellar Dispersion of Rosuvastatin for Improved Bioavailability: Formulation, Optimization and Pharmacokinetic Studies

Sridevi Gowripattapu[1,2], SathisKumar Dinakaran[2], Selvamuthukumar Subramanian[1,*]

[1]Department of Pharmacy, Annamalai University, Chidambaram, Tamil Nadu, INDIA.
[2]Department of Pharmacy, Aditya Pharmacy College, Surampalem, Andhra Pradesh, INDIA.

ABSTRACT

Introduction: Rosuvastatin is a statin drug used to lower cholesterol, but it has poor water solubility and low bioavailability, limiting how effective it can be. The objective of the present study was to formulate and evaluate a SNEDDS "self-nano emulsifying drug delivery systems" of Rosuvastatin and to optimize its formulation. **Materials and Methods:** The SNEDDS was produced using Egg lecithin, Capmul MCM, and Tween 20 as co-surfactant, oil, and surfactant, respectively. The formulation was optimized by Design Expert 12 and was characterized by various techniques such as globule s... zeta potential, % transmittance, refractive index, drug release studies etc. The optimized SNEDDS was loaded with different adsorbents by adsorption using technique and characterized for *in vitro* release studies, *in vivo* drug release studies and comparison studies with pure drug. **Results:** The SNEDDS were optimized which shows a negative zeta potential of -4.32, a globule size of 42.21 nm, and a faster release compared to other formulations. Drug release studies (*in vitro*) showed that the optimized SNEDDS-loaded tablet had more rapid rate of drug release (99.9% at 40 min) when compared with the pure drug (36.73% at 40 min). The *in vivo* study in healthy rabbits showed a highest release rate of drug from the SNEDDS loaded tablet (RRSV1) when compared with the pure drug resulting in an enhanced bioavailability of Rosuvastatin. **Conclusion:** The study concludes that the SNEDDS of Rosuvastatin is a promising approach for increasing solubility, rate of dissolution and bioavailability.

Keywords: Rosuvastatin, SNEDDS, Statistical optimization, Solubility, Dissolution rate, Bioavailability.

Correspondence:
Dr. Selvamuthukumar Subramanian
Associate Professor, Department of Pharmacy, Faculty of Engineering and Technology, Annamalai University, Annamalai Nagar-608002, Tamil Nadu, INDIA.
Email: smk1976@gmail.com

Received: 26-04-2023;
Revised: 11-05-2023;
Accepted: 03-11-2023.

INTRODUCTION

Hyperlipidemia, or high blood lipid levels, is a serious and growing health concern linked to various chronic diseases.[1] Rosuvastatin is a highly effective drug for man... ...ng hyperlipidemia, but its poor water solubility limits its dissolving rate and bioavailability.[2] Improving Rosuvastatin's solubility could help optimize its therapeutic potential to treat hyperlipidemia. The objective of this study was to formulate a Self-Nanoemulsifying Drug Delivery System (SNEDDS) in order to increase the solubility, dissolution, and bioavailability of Rosuvastatin. Nanotechnology has enabled innovative advances in diagnostics, food, and drug delivery. SNEDDS are one such innovation that combines the benefits of lipid-based delivery and nanotechnology. SNEDDS is a novel drug delivery approach that overcomes the limitations of delivering Biopharmaceutics Classification System (BCS) class II drugs like Rosuvastatin, which have poor water solubility.[3,4]

This work examined whether a SNEDDS could enhance the effectiveness of Rosuvastatin for treating high cholesterol. SNEDDS formulations contain oils, surfactants, and co-surfactants that spontaneously form nano-sized emulsions when dispersed in water. The nanoemulsion can increase the concentration of a drug in the oil phase, thereby enhancing its solubility. The study hypothesized that a Rosuvastatin SNEDDS would increase its solubility and bioavailability, improving its effectiveness against hyperlipidemia.

MATERIALS AND METHODS

Materials

The study obtained Rosuvastatin from Glenmark Pharmaceuticals. It acquired the oils Capmul and Captex 200 from MCM Abitec group, and obtained the surfactants Span 20, Tween 20, Tween 80, as well as the co-surfactants Poly Ethylene Glycol (PEG) 400 and propylene glycol and the co-surfactant egg lecithin from Merck.

DOI: 10.5530/ijper.58.1s.19

Ind. J. Pharm. Edu. Res., 2024; 58(1s):s176-s186.
https://www.ijper.org

Original Article

Application of Novel Natural Sweetening Agent-Stevia in Formulation, Evaluation of Nicardipine Hydrochloride Orodispersable Tablets for Rapid Absorption

Nagasen Dasari[1,2,*], Chirravuri Satyanarayana Phani Kumar[1,2], Rama Krishna Gummadi[1,2], Sai kiran Pindiprolu[1,2], Sujiya Balla[1,2], Amala Masa[3], Lavanya pulidindi[4], Vajrapu Subhaveera Prasanth[1,2]

[1]Aditya Pharmacy College, Surampalem, Andhra Pradesh, INDIA.
[2]Jawaharlal Nehru Technological University Kakinada, Kakinada, Andhra Pradesh, INDIA.
[3]Department of Pharmacology, Krishna University College of Pharmaceutical Science and Research, Machilipatnam, Krishna, Andhra Pradesh, INDIA.
[4]Department of Horticulture, East Godavari, Andhra Pradesh, INDIA.

ABSTRACT

Objectives: The objective of this study was to develop a stable and effective form of an Orodispersible tablet containing Nicardipine Hydrochloride for the immediate treatment of high blood pressure and angina. The aim was to achieve this by using the natural sweetener stevia to improve taste. **Background:** Nicardipine Hydrochloride is used to treat high blood pressure and angina. However, currently available immediate release forms have limitations in terms of drug release and taste. Therefore, the goal was to develop an Orodispersible form of the drug that would enhance drug release and improve taste masking capabilities. **Materials and Methods:** We developed formulations of Nicardipine Hydrochloride Orodispersible tablets using the natural sweetener *Stevia rebaudiana* to enhance taste and reduce the caustic sensation. We confirmed the compatibility of the drug-excipient mixture using FTIR. Drug content and dissolution were determined through UV spectrophotometry. We also conducted organoleptic tests and other compendial specification tests. Precompression parameters were evaluated, and measures were taken to improve the flow behavior of the formulation blend by using excipients with excellent flow properties. Based on disintegration and dissolution time, we selected the F6 formulation as the optimized formula. We then subjected the developed trial to stability studies for three months, evaluating disintegration time, drug content, and dissolution. **Results:** The optimized formulation demonstrated a disintegration time of 46.25±0.85 sec and a dissolution rate of 100.50±2.50. Compendial tests remained stable without any significant fluctuations after the stability study. Also, the taste of the drug was pleasant after taste. **Conclusion:** Through the appropriate selection of excipients, we successfully developed a stable and effective form of Nicardipine Hydrochloride Orodispersible tablet with enhanced drug release (using the solid dispersion technique) and improved taste masking capabilities. The optimized formulation yielded favorable results in terms of disintegration and dissolution time, drug content, and stability.

Keywords: Orodispersable tablets, *Stevia rebaudiana* FTIR, UV spectrophotometry, Angina pectoris.

Correspondence:
Mr. Nagasen Dasari
Assistant Professor, Aditya Pharmacy College, Surampalem, Kakinada-533437, Andhra Pradesh, INDIA.
Email: nagasenpharma@gmail.com

Received: 25-01-2023;
Revised: 09-02-2023;
Accepted: 03-11-2023.

INTRODUCTION

"Orodispersable Tablet" can be interpreted as "uncoated unit dosage form used for buccal or oral cavity, where it disperses prior to consumption" appears in Pharmacopoeia (European).They resolve the complications with desireble advantages associated with conventional dosage forms, and it has desired advantages like hardness, uniformity of dosage, extremely easy way of administration as no solvent is necessary for swallowing these tablets and also suitable for Upper age group (geriatric), Lower age groups (paediatric) and patients who are in travelling.[1] These tablets have impulsive rapid breakdown in the mouth upon contact with saliva, dissolution of the active ingredient, and absorption through the buccal membrane while in contact.[2] Present day, diverse novel technologies which are modern had initiated to formulate Orodispersable tablets with fascinating features, like masking the bitterness ability, low breakdown time, pleasant feel at oral cavity and sugar free tablets for diabetic patients. The modern techniques applied in constructinn of Orodispersable

DOI: 10.5530/ijper.58.1s.17

Ind. J. Pharm. Edu. Res., 2024; 58(1s):s176-s186.
https://www.ijper.org

Original Article

Application of Novel Natural Sweetening Agent-Stevia in Formulation, Evaluation of Nicardipine Hydrochloride Orodispersable Tablets for Rapid Absorption

Nagasen Dasari[1,2,*], Chirravuri Satyanarayana Phani Kumar[1,2], Rama Krishna Gummadi[1,2], Sai kiran Pindiprolu[1,2], Sujiya Balla[1,2], Amala Masa[3], Lavanya pulidindi[4], Vajrapu Subhaveera Prasanth[1,2]

[1]Aditya Pharmacy College, Surampalem, Andhra Pradesh, INDIA.
[2]Jawaharlal Nehru Technological University Kakinada, Kakinada, Andhra Pradesh, INDIA.
[3]Department of Pharmacology, Krishna University College of Pharmaceutical Science and Research, Machilipatnam, Krishna, Andhra Pradesh, INDIA.
[4]Department of Horticulture, East Godavari, Andhra Pradesh, INDIA.

ABSTRACT

Objectives: The objective of this study was to develop a stable and effective form of an Orodispersible tablet containing Nicardipine Hydrochloride for the immediate treatment of high blood pressure and angina. The aim was to achieve this by using the natural sweetener stevia to improve taste. **Background:** Nicardipine Hydrochloride is used to treat high blood pressure and angina. However, currently available immediate release forms have limitations in terms of drug release and taste. Therefore, the goal was to develop an Orodispersible form of the drug that would enhance drug release and improve taste masking capabilities. **Materials and Methods:** We developed formulations of Nicardipine Hydrochloride Orodispersible tablets using the natural sweetener *Stevia rebaudiana* to enhance taste and reduce the caustic sensation. We confirmed the compatibility of the drug–excipient mixture using FTIR. Drug content and dissolution were determined through UV spectrophotometry. We also conducted organoleptic tests and other compendial specification tests. Precompression parameters were evaluated, and measures were taken to improve the flow behavior of the formulation blend by using excipients with excellent flow properties. Based on disintegration and dissolution time, we selected the F6 formulation as the optimized formula. We then subjected the developed trial to stability studies for three months, evaluating disintegration time, drug content, and dissolution. **Results:** The optimized formulation demonstrated a disintegration time of 46.25±0.85 sec and a dissolution rate of 100.50±2.50. Compendial tests remained stable without any significant fluctuations after the stability study. Also, the taste of the drug was pleasant after taste. **Conclusion:** Through the appropriate selection of excipients, we successfully developed a stable and effective form of Nicardipine Hydrochloride Orodispersible tablet with enhanced drug release (using the solid dispersion technique) and improved taste masking capabilities. The optimized formulation yielded favorable results in terms of disintegration and dissolution time, drug content, and stability.

Keywords: Orodispersable tablets, *Stevia rebaudiana* FTIR, UV spectrophotometry, Angina pectoris.

Correspondence:
Mr. Nagasen Dasari
Assistant Professor, Aditya Pharmacy College, Surampalem, Kakinada-533437, Andhra Pradesh, INDIA.
Email: nagasenpharma@gmail.com

Received: 25-01-2023;
Revised: 09-02-2023;
Accepted: 03-11-2023.

INTRODUCTION

'Orodispersable Tablet' can be interpreted as "uncoated unit dosage form used for buccal or oral cavity, where it disperses prior to consumption" appears in Pharmacopoeia (European). They resolve the complications with desirable advantages associated with conventional dosage forms, and it has desired advantages like hardness, uniformity of dosage, extremely easy way of administration as no solvent is necessary for swallowing these tablets and also suitable for Upper age group (geriatric), Lower age groups (paediatric) and patients who are in travelling.[1] These tablets have impulsive rapid breakdown in the mouth upon contact with saliva, dissolution of the active ingredient, and absorption through the buccal membrane while in contact.[2] Present day, diverse novel technologies which are modern had initiated to formulate Orodispersable tablets with fascinating features, like masking the bitterness ability, low breakdown time, pleasant feel at oral cavity and sugar free tablets for diabetic patients. The modern techniques applied in construction of Orodispersable

DOI: 10.5530/ijper.58.1s.17

JOURNAL OF PHARMA INSIGHTS AND RESEARCH

RESEARCH ARTICLE

Enhancing pain relief and minimizing infection risk in abdominal surgery: An in-depth comparative investigation

Bhargavi Garaga[1], Haritha Kandavalli[2], Hemalatha Yarra[3], Minisha Nalli[4], Rupa Lavanya Gogulamanda[5], Ratna Kumari Padamati [6], Surendra Nath Borra[7]

[1]*Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[2]*Intern of pharm. D at Aditya pharmacy college, Surampalem, Andhra Pradesh, India*
[3]*Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[4]*Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[5]*Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[6]*Associate Professor in Dept. of Pharmacy Practice at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.*
[7]*Laparoscopic Surgeon at Trust Multispecialty Hospitals, Kakinada, Andhra Pradesh, India*

Publication history: Received on 22nd October; Revised on 20th November; Accepted on 26th November

Article DOI: 10.5281/zenodo.10246777

Abstract: Analgesics and antibiotics are essential for post-operative treatment because an analgesic typically reduces pain after surgery. By using the right antibiotics, surgical site infections (SSI) can be avoided. The purpose of this study is to assess the effectiveness of analgesics and antibiotics in post-operative hernia and cholelithiasis patients in relation to post-operative pain in surgical site infections. This is a prospective observational study and it is conducted for 6month period between November 2022 to April 2023 in surgical ward at Trust Multispecialty Hospitals, Kakinada, Andhra Pradesh. In this study a total of 115 postoperative subjects were selected, hernias are about 75 subjects and cholelithiasis are 40 subjects. Our study results conducted that, preoperative anesthetics and post-operative analgesics helps the subjects to experience moderate pain after surgery. Weak Opioid (Tramadol), narcotic analgesics (Fentanyl), NSAIDs (Aceclofenac), Paracetamol is given for pain relief. Among 115 subjects were treated with prophylactic antibiotics and none of them had developed with surgical site infection. For prophylaxis of SSI Cephalosporins were preferred as antibiotics like Ceftriaxone, Meropenem, Cefotaxim, (Cefoperazone-Sulbactam), (Piperacillin-Tazobactam) respectively. The study reported the concomitant strict usage of Antibiotics have reduced the incidence of Surgical site infections and the pain perception was reported to be low because of combination of Analgesics rather than the Single dosing and the administration of General Anesthesia before the surgery, along with the surgeon skill.

Keywords: Analgesics; Antibiotics; Post-Operative Pain; Surgical Site Infection; Hernia; Cholelithiasis

1. Introduction

Surgery almost often damages the tissue, which results in discomfort poor pain management causes delayed mobility and associated consequences as well as psychological discomfort and worry. Major abdominal operations with upper abdominal incisions induce considerable stomach pain that if not well managed, can result in atelectasis, retention of secretions, shallow breathing, and resistance to physical therapy [1, 2]. 30-80% of patients who have undergone surgery report moderate to severe post-operative pain [3]. Traditionally, systematic analgesics such as opioids, ketamine's NSAIDs, alpha 2 agonists, and Paracetamol or epidural anesthesia are used to manage pain during abdominal surgery [4]. After laparoscopic surgery, it's common for the sufferer to describe the pain as being intense, sharp, electronic, and stabbing [5].

The pain is measured by using the Universal Pain Assessment Tool (UPAT). The UPAT has a 0-10 number score, where the pain can be assessed based on "the Verbal Descriptor Scale", "Wong Baker Facial Grimace Scale" and "Activity Tolerance" [6].

UPAT is used to interpret the pain level in postoperative stages specifically in two population groups, one who underwent surgery with general anesthesia, and another group who undergone surgery with nerve block. The dose of analgesics to be prescribed postoperatively depends upon the level of pain. Anyhow, selecting an opioid is a crucial and frequently employed pharmacological therapy for the treatment of postoperative pain.

* Corresponding author: Bhargavi Garaga

Case Report

Beyond the norm: A case report on the unfolding spectrum of acute suppurative thyroiditis leading to abscess formation

Keerthana Gopidalai[1], K L N S Srisurya[1], Jessica Akumarthi[1], Arijit Goswami[1], Sree Jyothsna Midathada[1], Chetan Priyanka Angati[1], Pavan Kumar Yanamadala[2]

From [1]Students of Pharm. D, Department of Pharmacology, Viswanadha Institute of Pharmaceutical Sciences, Sontyam, Andhra Pradesh, India, [2]Assistant Professor, Department of Pharmacology, Aditya Pharmacy College, Surampalem, Andhra Pradesh, India

ABSTRACT

The thyroid gland's robust defenses, including a rich blood supply, lymphatic drainage, high iodine content, and physical isolation, typically render it resistant to infections. However, acute suppurative thyroiditis (AST) leading to a primary thyroid abscess is an uncommon occurrence, especially among children, accounting for only 0.1–0.7% of thyroid disorders. This case report outlines the clinical presentation of a 12-year-old male with prolonged fever, neck pain, sore throat, and swallowing difficulties. *Staphylococcus aureus* was identified as the causative agent. Treatment involved a combination of intravenous antibiotics and incision and drainage, resulting in a successful recovery. Despite its rarity, AST requires prompt recognition and intervention to prevent complications. This case emphasizes the significance of including AST in the differential diagnosis of neck swelling and underscores the necessity for early identification and appropriate management to ensure optimal patient outcomes.

Key words: Abscess, Lymphatic drainage, Neck swelling, Pyriform sinus fistula, *Staphylococcus aureus*, Thyroiditis

A thyroid abscess resulting from acute suppurative thyroiditis (AST) is an infrequent clinical occurrence. AST accounts for merely 0.1–0.7% of thyroid disorders, and within surgically treated thyroid diseases, only a minimal percentage, ranging from 0.1% to 0.7%, manifests as thyroid abscess secondary to AST [1]. This condition primarily affects individuals with existing thyroid gland pathologies, including thyroid cancer or Hashimoto's thyroiditis, and is associated with localized anatomical abnormalities, particularly in the pediatric population. Although bacterial infections represent the predominant etiology of AST, alternative causes encompass fungal, mycobacterial, and parasitic infections. AST typically manifests with common indicators such as erythema, pain, and discomfort that can radiate to the jaw, occiput, or ear on the affected side [2]. The resultant abscess has the potential to exert pressure on the trachea, esophagus, or recurrent laryngeal nerve. Progressive deterioration of the condition is marked by systemic symptoms, including fever, chills, and malaise, in the majority of patients [3].

In this case report, we present a noteworthy instance of thyroid abscess resulting from AST in a 12-year-old male patient, shedding light on the clinical presentation, diagnostic considerations, and the successful management approach adopted. This case underscores the importance of recognizing and promptly addressing AST complications, particularly the formation of a thyroid abscess, to achieve favorable patient outcomes and prevent potential morbidity and mortality associated with this uncommon thyroid disorder.

Access this article online

Received - 24 December 2023
Initial Review - 12 January 2024
Accepted - 26 February 2024

DOI: 10.32677/ijcr.v10i4.4409

Quick Response code

CASE REPORT

A 12-year-old male presented with symptoms including fever, painful neck swelling, sore throat, and dysphagia persisting for 4–8 days. In addition, he had a preceding history of mild fever and sore throat for the past 10 days. Clinical examination revealed a tender, warm, diffuse midline swelling in the thyroid region, accompanied by erythema on the overlying skin.

His vitals are as temperature recorded at 99.9°F, heart rate 110 bpm, respiratory rate 18 breaths/min, and normal levels of blood pressure. The swelling exhibited movement with deglutition and associated findings included tachycardia and restricted neck movements. The patient had a positive history of Brucellosis, which had been reportedly fully treated 2 months prior.

Laboratory investigations showed a leukocyte count of 14,300 with 70% polymorphs, a hemoglobin level of 12.9 g/dL, and

Correspondence to: Dr. Pavan Kumar Yanamadala, Aditya Pharmacy College, Surampalem - 533 437, Andhra Pradesh, India. E-mail: pavan.yanamadala@gmail.com

Asian Journal of Research in Medical and Pharmaceutical Sciences

Volume 12, Issue 4, Page 173-182, 2023; Article no.AJRIMPS.110031
ISSN: 2457-0745

Unraveling Medication Complexity in the Elderly: A Critical Assessment of Adherence Implications

Pavan Kumar Yanamadala [a++*], Nandini Palivela [a#], Aleena Roy [a#], Hemalatha Yarra [a#], Jessi Peruri [a#], Rupa Lavanya Gogulamanda [a#], Priyanka Kandregula [a#] and Minisha Nalli [a#]

[a] Aditya Pharmacy College, Surampalem-533437, Andhra Pradesh, India.

Authors' contributions

This work was carried out in collaboration among all authors. Author PKY formulated the study protocol and finalized the title and performed Methodology for the study. Authors NP and AR prepared the questionnaire form, and the data collection form required for the study. Authors HY and JP collected the cases, interviewed the patients and did all the necessary data-filling work. Authors RLG and PK have done the statistical analysis and drafted the manuscript. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJRIMPS/2023/v12i4240

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/110031

Original Research Article

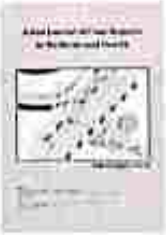
Received: 27/09/2023
Accepted: 03/12/2023
Published: 13/12/2023

ABSTRACT

Background: Chronic illnesses often affect grown-ups over 60 years of age, leading to inadequate and impecunious medication adherence, which increases the risk of bleakness, hospitalization, and mortality, despite the irrefutably factual benefits of certain medications.

Aim and Objectives: To appraise the degree of drug intricacy in older patients with chronic diseases and to break down the factors impacting drug adherence among them.

** Assistant Professor;
* Interns of Pharm D;
*Corresponding author: E-mail: pavan.yanamad[illegible]@gmail.com;



Asian Journal of Case Reports in Medicine and Health

Volume 6, Issue 1, Page 166-171, 2023; Article no.AJCRMH.107568

Primary Neural Tube Defects in Pediatrics – A Focus on Lipomeningocele

Thanmayi Sai Lakshmi Thota [a++], Yati Raj [a++], Madhuri Akasapu [a++], Hemalatha Yarra [a++], Nandini Palivela [a++] and Pavan Kumar Yanamadala [a#*]

[a] Aditya Pharmacy College, Surampalem-533437, India.

Authors' contributions

This work was carried out in collaboration among all authors. Author TSLT collected the case from the Pediatric Ward and wrote the abstract and the case presentation write-up of the case report. Authors YR and MA helped in Analyzing and constituting the Introduction, Discussion, and Conclusion part of the case report. Authors HY and NP managed the literature searches and guided the remaining authors in the preparation of the manuscript. All authors read and approved the final manuscript.

Article Information

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/107568

Case Study

Received: 02/08/2023
Accepted: 06/10/2023
Published: 11/10/2023

ABSTRACT

Background: Lipomeningocele is a congenital abnormality of the neural tube. It affects approximately one in every 50,000 infants. This is one of the most uncommon varieties of Spina bifida, which happens when a neural tube does not shut completely and sticks out of the Spinal column, forming a sack beneath the skin. During embryonic development, about day 21 or week 3, neural folds fuse to form a neural tube and form a complete neural tube on the 28th day. The unfused part of the spinal cord leads to Spina bifida. Getting enough folic acid, during pregnancy can help to prevent neural tube defects. Mothers who are obese, have poorly controlled diabetes,

** Students of Pharm. D;
* Assistant Professor;
*Corresponding author: E-mail: pavan.yanamadala@adityapharmacy.ac.in;

IJMPR 2023, 7(10), 71-76

International Journal of Modern Pharmaceutical Research

www.ijmponline.com

ISSN: 2319-5878
IJMPR
Research Article
SJIF Impact Factor: 5.273

UNRAVELING THE BIOLOGICAL REVOLUTION: UNCOVERING MENSTRUATION AND PUBERTY

Sri Krishnaveni Balla[1], Kavya Naga Praveena Jakka[2], Dipchand Shit[3], Koppisetti Ishwarya Vani[4], Keerthana Gopidalai[5] and Dr. Pavan Kumar Yanamadala*[6]

[1,2,3,4]Students of Pharm. D at Aditya Pharmacy College, Surampalem-533437, India.
[5]Student of Pharm. D at Viswanadha Institute of Pharmaceutical Sciences College, Sontyam-531173, India.
[6]Assistant Professor at Aditya Pharmacy College, Surampalem-533437, India.

Received on: 15/08/2023
Revised on: 05/09/2023
Accepted on: 25/09/2023

***Corresponding Author**
Dr. Pavan Kumar Yanamadala
Assistant Professor at Aditya Pharmacy College, Surampalem-533437, India.

ABSTRACT

Menstrual health is an essential yet often neglected aspect of adolescent girls' overall well-being, particularly in rural areas with limited access to proper hygiene facilities, education, and healthcare services. This community-based survey attempts to address the various obstacles regarding menstrual health in rural regions and suggests ways to improve adolescent girls' well-being. This survey used a cross-sectional study design to assess the knowledge of menstruation and puberty in 200 girls aged 10–16 years who attained menarche. Several young adolescent girls answered the questionnaire, and their responses were recorded using a data collection form. The data collection form includes information regarding menstruation and puberty, such as initial symptoms, menstrual cycle duration, and menstrual hygiene. Approximately 16 survey questions and responses were analysed. Each accurate response received one point, while inaccurate responses received none. According to the study, only 22% of young girls were aware of the signs of puberty, whereas 78% of those who had experienced menarche were unaware of the same which may be attributed to various factors. Among the study population, 35% hold the view that healthcare professionals are the best advisors on menstruation and puberty. This research highlights the need to prioritize menstrual health among adolescent females in rural locations and this work's broader aim is to promote a healthier and more equitable future for young girls by recognizing the issues and suggesting culturally relevant solutions, ensuring that they can navigate adolescence with dignity and confidence.

KEYWORDS: Menstrual Education, Puberty Education, Adolescent Health, Menstrual Hygiene Management, Menstrual Stigma, Menstrual Myths.

INTRODUCTION

Menstrual health is a crucial aspect of general well-being, yet it is still a problem that is often ignored and judged, especially in rural areas. Teenage girls experience enormous challenges when it comes to maintaining their menstrual health in many parts of the world, particularly in isolated rural areas. The challenges young girls face are made worse by a lack of information, basic sanitation, and period hygiene supplies.[1]

The principal objective of this research investigation is to gain some insight into the multiple issues that adolescent girls in rural regions experience when it comes to menstruation health and to provide effective measures for advancement. This study aims to provide insights into the overall necessities of these girls by exploring the socio-cultural circumstances, financial obstacles, and infrastructure limitations that result in menstrual-related issues.

Adolescent girls come across numerous problems, which include inadequate sanitation facilities, limited access to menstrual hygiene products, and social restrictions that promote myths and prevent open conversations. These obstacles add up to a cycle of disempowerment, which impacts not only physical health but also education, self-esteem, and future possibilities.[2,3]

The purpose of this research work is to provide advantageous perspectives in both academic and practical fields. This research focuses on beneficially affecting the lives of numerous adolescent girls who deserve better menstrual health and the opportunities that come with it through improving knowledge regarding the issues at hand as well as revealing long-term solutions.

It is to magnify the voices of these adolescent girls to acquire a greater understanding of their experiences, utilizing rigorous data collection methods such as surveys, interviews, and case studies. We hope to develop an inclusive approach that ensures the long-term viability

JOURNAL OF PHARMA INSIGHTS AND RESEARCH

RESEARCH ARTICLE

Managing the dual burden: Pharmacoepidemiological insights into anti-diabetic and anti-hypertension medication use

Lakshmi Renuka Chikkala*[1], Priyanka Kandregula[2], Narottam Debnath[3], Bipin Sah[4], Ratna Kumari Padamati[5], Phani Ramana Bhushan M[6].

[1] *Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[2] *Intern of pharm. D at Aditya pharmacy college, Surampalem, Andhra Pradesh, India*
[3] *Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[4] *Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[5] *Associate Professor at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[6] *General Physician at Trust Multi-specialty Hospitals, Kakinada, Andhra Pradesh, India*

Publication history: Received on 22nd October; Revised on 20th November; Accepted on 26th November

Article DOI: 10.5281/zenodo.10246766

Abstract: The most prevalent non-communicable diseases that need long-term therapy include hypertension and diabetes mellitus. Mortality and morbidity rates increase when diabetes and hypertension are present together. These disorders must be taken into consideration in order to manage them successfully when they coexist. Both diabetes and hypertension are most likely to develop macrovascular and microvascular complications. Tight control of blood pressure is more helpful in diabetic-hypertensive patients than tight control of blood glucose levels. This study aims to learn about anti-diabetic and anti-hypertensive drug therapy, clinical outcomes, and how combination therapy affects the clinical outcome of diabetes with hypertension. It was a prospective single-centered observational study conducted among 300 Diabetic-Hypertensive patients. The mean age of the study was 58.8 years. According to this study, 56% were males and 44% were females. The commonly observed comorbidity conditions along with diabetes and hypertension were CKD (20.6%), UTI (15%), and Neuropathic diabetes (14%). The most affected occupations with diabetes and hypertension were Private Jobs (31%), Retired Employees (21%), and Homemakers (20%). The most prescribed drugs in diabetic-hypertensive patients were Metformin (7%), Metoprolol (11.7%), Metoprolol with Cilnidipine (5.6%), Metformin with Glimepiride (8.4%), Olmesartan with Amlodipine and Hydrochlorothiazide (8%), and Glimepiride with Metformin and Voglibose (6.3%). The conclusion of this study, males were more affected by diabetes and hypertension and mostly observed in the elderly. The anti-diabetic combination therapy and its clinical outcome are not associated with each other. The anti-hypertensive combination therapy and its clinical outcome are associated with each other.

Keywords: Diabetes mellitus; Hypertension; Monotherapy; Combination therapy; Anti-Hypertension drugs; Anti-Diabetic drugs

1. Introduction

Diabetes and hypertension are the most prevalent non-communicable diseases that are frequently seen together. When compared to normotensive and non-diabetic individuals, the co-existence of diabetes with hypertension is associated with a considerably higher risk (two-to-four-fold times) of cardiovascular disease, end-stage renal disease and mortality [1]. Diabetes mellitus is a carbohydrate metabolic disorder characterized by the body's reduced capacity to generate or respond to insulin and maintain normal blood sugar levels [2]. Systemic arterial hypertension (also known as hypertension) is characterized by persistently high blood pressure in the systemic arteries [3].

In India, an estimated 77 million individuals are diabetic and about 25 million are pre-diabetics (with a higher risk of getting diabetes) [4]. According to researchers, this number will rise to 134 million by 2045. Males get diabetes at a rate of 55.5% after age 20. Females account for 64.6% of the total [5]. India has one of the highest rates of hypertension prevalence, with about 30%of the Indian population suffering from hypertension [6]. It is estimated that one in every four people in India has hypertension [7]. But only approximately 12% of them have their blood pressure under control [8].

Diabetes is associated with both macrovascular (involving large vessels such as arteries and veins) and microvascular (involving small vessels, such as capillaries) complications. Hypertension is an important risk factor for diabetes related vascular complications

* Corresponding author: Lakshmi Renuka Chikkala

International Journal of Medical and Pharmaceutical Case Reports

Volume 16, Issue 4, Page 69-73, 2023; Article no.IJMPCR.106704
ISSN: 2394-1093, NLM ID: 101666033

A Rare Neurological Sequela: Pontine Infarct Conducing to Millard-gubler Syndrome

Hema Ratna Sai Lakshmi Vemana [***], Nisar Ahmed [***], Bhagya Aruna Chikkala [***], Rupa Lavanya Gogulamanda [***], Priyanka Kandregula [***], Minisha Nalli [***] and Pavan Kumar Yanamadala [#*]

[*] Aditya Pharmacy College, Surampalem 533437, India.

Authors' contributions

This work was carried out in collaboration among all authors. Authors HRSLVV and NA gathered the case from emergency ward and author PKY arranged the theoretical and the presentation review of the case report. Author NA edited it extensively the literature and and authors BAC and RLG critiqued every of the case study alongside the remaining writers. Authors PK and MN aided in drafting the presentation, discussion and summarized the conclusion part of the case report. Author PKY alongside author RLG dealt with the literature searches and other authors in the arrangements of the manuscript. Every one of the authors read and supervised the last original copy. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/IJMPCR/2023/v16i4106704

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, publication history, and review comments may be accessed at https://www.sdiarticle5.com/review-history/106704

Case Study

Received: 04/09/2023
Accepted: 08/11/2023
Published: 15/11/2023

[#] Professor of Pharm. D,
Aditya Pharmacy College,
*Corresponding author: E-mail: pavan.yanamadala@gmail.com;

Int. J. Med. Pharm. Case Rep., vol. 16, no. 4, pp. 69-73, 2023; Art. no.IJMPCR.106704

International Journal of Medical and Pharmaceutical Case Reports

Volume 16, Issue 4, Page 99-104, 2023; Article no.IJMPCR.110464
ISSN: 2394-109X, NLM ID: 101648033

Beyond the Usual Suspects: Emerging Insights into Takayasu's Arteritis and Its Role in Secondary Hypertension

Jessi Peruri [a++], Harshitha Manasa Koppuravuri [b#], Hemalatha Yarra [a++], Lohitha Sri Sowmya Nomula [b#], Minisha Nalli [a++], Priyanka Kandregula [a++] and Pavan Kumar Yanamadala [a†*]

[a] Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[b] Shri Vishnu College of Pharmacy, Bhimavaram, Andhra Pradesh, India.

Authors' contributions

This work was carried out in collaboration among all authors. Author JP gathered the case from the emergency ward. Authors HMK and LSSN arranged the theoretical and the presentation review of the case report. Author HY aided in reviewing the literature part. Authors MN and PK chipped away at the case presentation alongside the remaining authors. Authors HMK and LSSN aided in drafting the presentation, discussion, and summarized the conclusion part of the case report. Author PKY alongside author JP dealt with the literature searches and other authors in the arrangement of the manuscript. All authors read, supported and approved the final manuscript.

Article Information

DOI: 10.9734/IJMPCR/2023/v16i4358

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/110464

Case Report

Received: 02/10/2023
Accepted: 09/12/2023
Published: 28/12/2023

** Interns of Pharm. D;*
** Students of Pharm. D;*
† *Assistant Professor;*
**Corresponding author: E-mail: pavan.yanamadala@gmail.com;*

JOURNAL OF PHARMA INSIGHTS AND RESEARCH

RESEARCH ARTICLE

A Holistic study on demographics and cardiac imaging in cardiac implantable electronic device users

Aleena Roy*[1], Nandini Palivela [2], Jessi Peruri [3], Kasturi De[4], Anurag Rajkonwar[5], Ratna Kumari Padamati[6], Chandramouli S Mantravadi[7]

[1] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[2] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[3] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[4] Assistant Professor at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India
[5] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[6] Associate Professor at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[7] Consultant Cardiologist at Trust Multi-speciality Hospitals, Kakinada, India.

Publication history: Received on 22nd October; Revised on 20th November; Accepted on 26th November

Article DOI: 10.5281/zenodo.10246792

Abstract: Worldwide there were reportedly 1.14 million pacemaker implantations starting around 2022. The number is supposed to ascend by 1.48 million by the year 2027. The remarkable ascent in pacemaker implantation throughout the course of recent many years might be credited to the aging population and the extension of pacing signs, for example, complete heart block and congestive cardiovascular breakdown. The embedded cardiovascular pacemakers have progressed from clear, non-programmable, non-coordinated ventricular pacing to complex multi-programmed double chamber and biventricular gadgets. Goals: The ongoing review plans to give point by point data with respect to segment profiles, ECG qualities, and 2D Reverberation discoveries of patients who went through pacemaker implantation. We conducted single centered focused, ambi-directional, cross-sectional study in a Tertiary care hospital, Kakinada with the data of 118 subjects for a review time of 1 year. 112 were signed up for our review while the leftover 6 were passing cases and individuals with positively no interest in cooperation. Results: Among 112 subjects, the larger part 38 (40%) subjects were determined to have Total heart block followed by Congestive cardiovascular breakdown 27 (24%). According to ECG irregularities, 41 (37%) subjects had total AV block followed by 36 (32%) subjects who were determined to have sick sinus syndrome. conclusion: The subjects with severe left ventricular ejection fraction are highly recommended to go through gadget implantation straightaway. The number of patients getting long-lasting pacemakers, Implantable Cardioverter defibrillators, and cardiovascular resynchronization treatments has expanded as a result of advancements that save lives, improve the quality of life and lower mortality.

Keywords: Cardiac Implantable Electronic Device; Cardiac Resynchronization Therapy; Complete Heart Block; ECG abnormalities; Implantable Cardioverter Defibrillator; Left Ventricular Ejection Fraction

1. Introduction

The term Cardiac Implantable Electronic Device is basically used to refer to all kinds of implantable medical equipment which mainly comprises pacemakers, cardiac defibrillators, specialized pacemakers, and defibrillator models. Pacemakers are compact electronic medical devices that detect electric impulses from electrodes and deliver electric stimulation as required. The aim of cardiac pacing is to maintain a healthy heart rate [1-2]. Pacemaker insertion is mainly performed in cardiac catheter laboratories by a team of health care experts comprising the consultant cardiologist, cardiac technician, cardiac nurse, and radiographer. The procedure is mostly carried out under local anesthesia and the left subclavian vein route is mostly preferred [3].

Bradyarrhythmias and tachyarrhythmia are treated with modern pacemaker devices, which are sometimes paired with implantable defibrillators [4].

2D ECHO findings of patients who underwent pacemaker implantation. The need to research the outcomes, and patient experiences is greater than ever due to the rising number of cardiovascular patients Devices that preserve synchronization between atria and ventricles are recommended in elderly patients. Adults with pacemakers are typically installed to address fascicular blocks, acquired atrioventricular blocks, and sinus node dysfunction. Additionally, they are efficient in the treatment and prevention of a few types of neurocardiogenic syncope and tachyarrhythmia. Recent studies have demonstrated that biventricular pacing is a successful treatment for advanced heart failure in patients with substantial intraventricular conduction [5]. Most pacemakers are comprised of

* Corresponding author: Aleena Roy

Research Article

Assessing emergency contraception awareness among married women in primary health centers within East Godavari villages

JOPIR

[illegible]

[illegible]

Abstract: [illegible]

Keywords: [illegible]

1. Introduction

[illegible]

2. Methodology

[illegible]

*Corresponding author: [illegible]

WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 12, Issue 7, 732-764. Research Article ISSN 2277– 7105

QUANTIFYING THE PREVALENCE AND INTERDEPENDENT RELATIONSHIPOF PCOD, OBESITY, AND DEPRESSION – A PROSPECTIVE OBSERVATIONAL, POLYCENTRIC STUDY

Dr. Pavan Kumar Yanamadala*[1] and Nallaparaju Lalitha Sanjana[2]

*[1]Assistant Professor At Aditya Pharmacy College, Surampalem,East Godavari District, Andhra Pradesh, India.

[2]Intern of Pharm. D At Aditya Pharmacy College, Surampalem,East Godavari District, Andhra Pradesh, India.

Article Received on
13 March 2023,

Revised on 02 April 2023,
Accepted on 23 April 2023

DOI: 10.20959/wjpr20237-27985

***Corresponding Author**
Dr. Pavan Kumar Yanamadala
Assistant Professor At Aditya Pharmacy College, Surampalem, East Godavari District, Andhra Pradesh, India.

ABSTRACT

The most prevalent endocrinopathy, polycystic ovarian syndrome (PCOS), affects about 11.2% of women of reproductive age and is linked to metabolic disease and reproductive failure. According to the Indian FertilitySociety's research from 2014, the prevalence of PCOD in India ranges from 3.7% to 22.5%. Due to the high frequency and numerous problems of PCOS, which include ovarian and menstrual disorders, infertility, hirsutism, and metabolic & psychiatric diseases, it significantly burdens the nation's healthcare system and the quality of life of the patients. A polycentric, prospective, observational, cross-sectional study involving 300 women with PCOS/PCOD was carried out, in which the study subjects were divided into three age groups (15–25 years, 26–35 years, and 36–45 years). The study's major goal was to determine the prevalence of obesity and depression in women with PCOS/PCOD and to compare it between married and unmarried women with the same condition. Clinical consequences are more common in PCOD than in other conditions. In this study, depression and BMI were examined. The subject's socioeconomic status and clinical symptoms were elicited using a semi-structured questionnaire. Using the Hamilton Depression (HAM-D) rating scale, the severity of the depression was evaluated. For various age groups, it was determined that irregular menstrual periods (68.33%), infertility (28.33%), acne (44.6%), hirsutism (52.6%), and Acanthosis Nigricans (30%) were statistically significant. This study's participants had obesity prevalence rates of 71% and depression prevalence rates of 60%,

Asian Journal of Case Reports in Medicine and Health

Volume 6, Issue 1, Page 172-178, 2023; Article no.AJCRMH.108234

HELLP Syndrome: A Rare but Critical Obstetric Conundrum

Madhuri Akasapu [a++], Sri Satya Manogna Naidu Vanarasi [a++], Pavan Kumar Yanamadala [a#*], Rupa Lavanya Gogulamanda [a++], Thanmayi Sai Lakshmi Thota [a++], Nandini Palivela [a++] and Bhagya Aruna Chikkala [a++]

[a] Department of Pharmacy Practice, Aditya Pharmacy College, Surampalem-533437, India.

Authors' contributions

This work was carried out in collaboration among all authors. Authors MA and SSMNV gathered the case from emergency ward and author MA arranged the theoretical and the presentation review of the case report. Author SSMNV aided in reviewing the literature part and authors PKY and RLG chipped away at the case show alongside the remaining writers. Authors TSLT and NP aided in drafting the presentation, discussion, and summarized the conclusion part of the case report. Author BAC alongside author SSMNV dealt with the writing searches and other authors in the arrangement of the manuscript. All authors read and approved the final manuscript.

Article Information

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/108234

Case Study

Received: 15/08/2023
Accepted: 20/10/2023
Published: 26/10/2023

ABSTRACT

Background: HELLP Syndrome is one of the significant difficulties of pregnancy and the acronym represents H=Hemolysis, EL=Elevated Liver Enzymes, LP=Low Platelets. It is a significant and hazardous type of toxemia, which is a condition where a pregnant lady has hypertension that harms the Liver and Kidney. It typically develops between the 26th to 40th long stretches of Fetal

** Students of Pharm. D;
* Assistant Professor;
*Corresponding author: E-mail: pavan.yanamadala@gmail.com;

Journal of Cardiovascular Disease Research

ISSN 0975-3583|0976-2833 VOL 14, ISSUE 07, 2023

Screening and discovery of novel carbamate compounds for cancer therapy

Dr. Lavanya Vaidikar[1], Pydiraju Kondrapu[2], Astha Mishra[3], Pramod Bhaskar Kumar[4], Dr. Arshad Ahmad[5], Dr. Shaima K A[6], Dr. Chamaraja N A[7], Dr. Shubhangi Tripathi[8]*

[1]*Professor, Seven Hills College of Pharmacy, Tirupati-517561, Andhra Pradesh*
[2]*Assistant Professor, Aditya pharmacy college, Surampalem, ADB road, kakinada district, A.P 533437*
[3]*Assistant Professor, Sagar institute of technology and management department of pharmacy*
[4]*Associate Professor, Shree Devi College of Pharmacy (RGUHS, Karnataka), Airport road Kenjar Mangalore DK 574142,Karnatakae*
[5]*Professor, NGI College of Pharmacy, Modipuram Meerut UP- 250110*
[6]*Associate Professor, Shambhunath Institute of Pharmacy, Jhalwa, Prayagraj, Uttar Pradesh 211012*
[7]*Assistant Professor, Department of Chemistry, JSS Academy of Technical Education (Affiliated to Visvesvaraya Technological University, Belagavi), Dr.Vishnuvardhan Road, Bengaluru 560 060, India*
[8]*Assistant Professor, J. N. L. College, Khagaul, Patna 801105, Patliputra University, Patna*

***Corresponding Author Details:Dr. Shubhangi Tripathi**

drshubhangitripathi@gmail.com

ABSTRACT

A 33 KDa serine hydrolase enzyme known as monoacylglycerol lipase is associated with a number of physiological processes in people, including pain, inflammation, and neurodegenerative diseases. The enzyme has been discovered to be associated with the endocannabinoid lipid signalling network system and has been found to be present in both the central and peripheral nervous systems. Enzyme support the growth of cancer and tumour cells by acting as a source of free fatty acids. It has been noted that the enzyme's activity is elevated in dividing and expanding cells in a number of cancer types. The signalling molecules phosphotidic acid, lysophosphatidic acid, sphingosine phosphate, and prostaglandin E2 are found to be free fatty acid-derived and have been linked to the proliferation, migration, and survival of cancer cells. They also rise as a result of enzyme activity. In the current work, we have carried out the identification task and screening investigation for the newly developed carbamate derivatives as anti-cancer moieties using docking and other computational tools.

Keywords: Enzyme, Inhibitors, Monoacylglycerol, Lipase, Cancer, Inflammation.

Introduction

The Monoacylglycerol Lipase (MAGL), a membrane-bound serine hydrolase (Castelli et al., 2020; Jiang & Van Der Stelt, 2018; Malamas et al., 2020; L. Zhang et al., 2019) prevalent in peripheral organs such as the liver, kidney, testis, lungs, prostate, and small intestine as well as the central nervous system, is crucial to the endocannabinoid system (Dato et al., 2020). The endocannabinoid system (eCB) is a lipid signalling network that has been discovered to be present in both the central and peripheral nervous systems (Z. Chen, Mori, Fu, et al., 2019;

Journal of Cardiovascular Disease Research

ISSN: 0975-3583,09 76-2833 VOL14, ISSUE 07, 2023

A Concise Review of Natural Derivatives for Breast Cancer Treatments

Jhakeshwar Prasad[1], Tushar Arun Rode[2], Dr. Pradeep C. Dave[3], Rashmi[4], Talquees Ahmad[5], Pydiraju Kondrapu[6], Rajeev Ranjan[7], Ms Ishwari R Chaudhari[8], Dr. Shubhangi Tripathi[9]*

[1]Assistant Professor, Shri Shankaracharya College of Pharmaceutical Sciences, Junwani - 490020, Bhilai, Chhattisgarh, India

[2]Assistant Professor, P. W. College of Pharmacy, Moha Phata, Dhamangaon road, Yavatmal. (MS) 445001.

[3]Associate Professor and Head, Department of Biochemistry, Bharati Vidyapeeth ((Deemed to be University) Dental college and Hospital, Sec-7, C. B. D Belpada, Opp. Kharghar ((Station), Navi Mumbai -400614

[4]Assistant Professor, Shri Shankaracharya College of Pharmaceutical Sciences, Junwani - 490020, Bhilai, Chhattisgarh, India

[5]Assistant Professor, Mesco Institute of Pharmacy, Amroha

[6]Assistant Professor, Aditya Pharmacy College, Surampalem, India

[7]Assistant Professor, Univ. Department of Chemistry, DSPM University, Ranchi-834008

[8]Assistant Professor, Pataldhamal wadhwani college of Pharmacy, Moha Phata yavatmal/SGBAU Amravati University, Pin code 445001

[9]Assistant Professor, J. N. L. College, Khagaul, Patna 801105, Patliputra University, Patna

***Corresponding Author Details:Dr. Shubhangi Tripathi,**

drshubhangitripathi@gmail.com

ABSTRACT:

Introduction: Cancer kills most of the people. Breast cancer will have the highest cases in 2020. Geography, genetics, hormones, oral contraceptives, and lifestyle may cause breast cancer, which may be treated in many ways. Radiation, chemotherapy, hormone treatment, and immunotherapy for breast cancer. Due to non-selectivity, multidrug resistance, and bioavailability, standard breast cancer treatments need to be enhanced. **Aim:** This review's main goal is to provide information about effective natural cancer treatments. **Method:** All the data were collected from published paper which are indexing in SCOPUS, Web of Science and UGC. **Result and Conclusion:** In recent decades, efforts have been made to find anticancer drugs based on phytochemicals. In order to better understand phytochemicals as possible medications and reliable research subjects, the authors wish to expand the field of inquiry. Therefore, understanding of anticancer phytochemicals is stressed for the treatment of breast cancer.

KEYWORD: *Phytochemicals, anticancer, preclinical, clinical, medicinal plants, breast cancer.*

Journal of Cardiovascular Disease Research

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 07, 2023

Characterization, Antioxidant, and Antibacterial Properties of Pyrus pashia Stem Bark-Mediated Green Silver Nanoparticle Synthesis

Virendra Kumar Mourya[1], Pydiraju Koudrapu[2], Pushpendra Kumar Kurre[3], Santosh Kumar[4], Dr Raghvendra[5], Dr. Mukesh Kumar Meena[6], Rajeev Ranjany[7], Sivasubramanian P*

1.Research Scholar, Department Of Applied Science & Humanities, Rajkiya Engineering College Ambedkar Nagar UP

2. Assistant Professor, Aditya Pharmacy College,ADB Road, Surampalem,Kakinada District AP

3. Assistant Professor, Shri Rawatpura Sarkar University Raipur. (C.G.) Nh-43, Dhamtari Road, Raipur C.G

4. Associate Professor, Sanskriti University

5. Principal, Aligarh College Of Pharmacy, Mathura Road Sasni Gate, Aligarh U.P.

6. Assistant Professor, Department Of Pharmaceutical Sciences, Mohanlal Sukhadia University, Udaipur, Rajasthan

7. Assistant Professor,Univ. Department Of Chemistry, DSPM University, Ranchi

Corresponding Author: Sivasubramanian P*,

Email: yuccasiva@gmail.com

Associate Professor, SNS College of Pharmacy and Health Sciences Coimbatore 641035

Abstract: The investigation of using medicinal plants for the production and application of silver nanoparticles (AgNPs) has attracted growing research interest. In this study, AgNPs are synthesized from the stem barks of the Pyrus pashia medicinal plant using a biosynthetic strategy. The reaction conditions were optimized under ambient conditions, including concentration, temperature, time, and pH, and various techniques were employed, such as UV-visible, FTIR, XRD, FESEM, and TEM, to characterize the synthesized AgNPs. The AgNPs produced through this biosynthesis method were found to be spherical and polydispersed, with an average size of 23.92 ± 7.04 nm. The synthesized AgNPs demonstrated an enhanced DPPH free radical scavenging capacity compared to the aqueous extract, with IC50 values of 10.67 ± 0.05 µg/mL and 13.66 ± 0.35 µg/mL, respectively. In the agar well diffusion method, the

EVALUATION OF ANTI-CONVULSANT POTENTIAL OF ALLIUM SATIVUM EXTRACT IN VALIDATED ANIMAL MODELS

Pydiraju Kondrapu[1], Shailaja Nare[2], Ganesh Rangrao Pawar[3*], A. Rekha Devi[4], Mamta Bhatia[5], Nisha Choudhary[6], Talele Dipali[7], Moushumi Baidya[8]

Article History: Received: 11.04.2023 **Revised:** 27.05.2023 **Accepted:** 13.07.2023

Abstract

Allium sativum, also known as ALLIUM SATIVUM, is a basic vegetable that has traditionally been used for cooking, flavoring, and natural remedies. Patented organic sulfur compounds in ALLIUM SATIVUM include diallyl sulfide, allicin (dially lthiosulfate), -glutamylcysteine, S-allylcysteine (alliin), and ajoene. ALLIUM SATIVUM positively affects stimulation, oxidative pressure markers, hypertension, hyperlipidemia, and endothelial capacity in vitro or in animal models. In addition to their use in humans, these bioactive atoms play a significant role in the creation of domesticated animals and fish. The modern rural concept of natural animal culture is dependable with the addition of ALLIUM SATIVUM and its related goods to animal feed. This study collects information on the effects of using ALLIUM SATIVUM and its extracts on certain animal execution limits, including chicken, hares, ruminants, pigs, and fish. This audit may serve as a guide for researchers and businesspeople as they investigate the uses of feeds containing ALLIUM SATIVUM and allicin side effects to enhance animal husbandry and seafood output.

Keywords: Animal production, allium sativum, Nutritional applications, anti-convulsant potential, allium sativum, extract.

[1]Assistant Professor, Aditya pharmacy colleg, ADB road , Surampalem, Kakinada, Andhra Pradesh. 533437

[2]Assistant professor, Bharati Vidyapeeth College of Pharmacy, Near Chitranagari, Kolhapur, Maharshtra- 416013

[3*]Department of Pharmacology, NSPM'S College of Pharmacy, Arni Bypass Road Darwha District Yavatmal, Maharashtra, India. 445202

[4]Associate Professor, SEVEN HILLS College of Pharmacy, Venkataramapuram, Tirupati, Andhra Pradesh. 517526

[5,6]Assistant Professor, Maulana Azad University, Bhujawar, Jodhpur, Rajasthan. 342802

[7]Assistant Professor, Faculty of Pharmacy, Vishwakarma University, Survey No 2,3,4 Laxmi Nagar, Kondhwa, Budruk, Pune. 411048

[8]Assistant Professor, Bharat Pharmaceutical Technology, Amtali, Agartala, Tripura. 799130

[*]Corresponding Author
Ganesh Rangrao Pawar[3*]
[3*]Assistant Professor, NSPM'S College of Pharmacy, Arni Road Darwha Dist Yavatmal, Maharashtra, India. 445202

DOI: 10.31838/ecb/2023.12.s3.672

IN VITRO AND IN VIVO ASSESSMENT OF SEMECARPUS ANACARDIUM SEEDS FOR NOOTROPIC & HALLUCINOGEN ACTIVITY

Mamatha M K[1], Pydiraju Kondrapu[2], Shaiuda Laeeq[3], R. A. M. Jainaf Nachiya[4*], Muzaffar Ahmed Farooqui[5], Bishwanath Mishra[6], Kartikey Pandey[7], Nidhi Nitin Chauhan[8]

Article History: Received: 08.03.2023 **Revised:** 21.05.2023 **Accepted:** 13.07.2023

Abstract

The study's main objective is to assess whether Seme carpus anacardium seeds may enhance wistar rats' memory. Materials and Techniques Utilizing the Morris water test and a raised in addition to labyrinth contraption to gauge a property called move dormancy, the seeds of Seme carpus anacardium were separated utilizing a consecutive dissolvable extraction strategy. As a result, transfer latency was reduced dose dependently when using Seme carpus anacardium seeds extract in comparison to the control group. Conclusion: Its viability against neurodegeneration and backing for its nootropic characteristics were shown by the reduction in move idleness, which was portion subordinate.

Keywords: Seme Carpus, Hallucinogen Activity, Anacardium Seeds, Nootropic.

[1]Associate Professor, Mallige College of Pharmacy Silvepura Bangalore. 560090
[2]Assistant Professor, Aditya pharmacy colleg, ADB road ,Surampalem, Kakinada, Andhra Pradesh. 533437
[3]Assistant Professor, Maharana Pratap college of Pharmaceutical Sciences.
[4]Assistant Professor, B. S. Abdur Rahman Crescent Institute of Science And Technology, Crescent school of pharmacy.
[5]Professor, Auranagabad Pharmacy college Mitmita Aurangabad, Maharashtra. 431002
[6]Assistant Professor, Institute of Pharmacy & Technology, Salipur, Cuttack, Odisha 754202.
[7]Assistant Professor, Krishanarpit institute of pharmacy, Iradatganj, Ghoorpur, Prayagraj, Uttar Pradesh. 212107
[8]Professor & HOD in the Department of Pharmacognosy, Laxminarayandev College of Pharmacy, Bholav, Bharuch, Gujarat. 392001

***Corresponding Author**
R. A. M. Jainaf Nachiya[4*]
[4*]Assistant Professor, B. S. Abdur Rahman Crescent Institute of Science And Technology, Crescent school of pharmacy

DOI: 10.31838/ecb/2023.12.s3.668

ADITYA PHARMACY COLLEGE SURAMPALEM 533 437

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437

Nisoldipine, Antihypertensive Drug with Solubility Enhancement: Formulation and Evaluation

Sarita Garg[1], Pydiraju Kondrapu[2], Dr Lalit Mohan Trivedi[3], Ms Preeti[4], Rajeev Ranjan[5], Jitendra M Shah[6], Ashish Kumar Tiwari[7], Muhammed Amanat[8], Pryanka[9]*

[1] *Associate Professor, Vaish Institute of Pharmaceutical Education and Research, Rohtak*
[2] *Assistant Professor, Aditya pharmacy college, Surampalem, ADB road, Kakinada District, AP 533435*
[3] *Assistant Professor, Moradabad Institute of Technology Ramgangavihar II Moradabad UP244001*
[4] *Assistant Professor, Gurugram Global College of Pharmacy, Farruknagar, Gurugram, Haryana,122506*
[5] *Assistant Professor, Univ. Department of Chemistry, DSPM University, Ranchi-834008*
[6] *Assistant Professor, Sandip Institute of Technology and Research Centre, Nashik*
[7] *Assistant Professor, Krishnarpit Institute of Pharmacy, Irradatganj, Ghoorpur, Prayagraj Pin code-212107*
[8] *Assistant Professor, Central University of Punjab, Ghudda, Bathinda- 151401*
[9] Assistant Professor, Rayat Bahara University, Sahauran, Tehsil Kharar, Distt Kharar, Punjab 140103

Corresponding Author:Pryanka,
pryankamatta@gmail.com

Abstract

A nanoemulsion is a thermodynamically or kinetically stable liquid dispersion made up of two immiscible liquid phases, such as an oil phase and a water phase. The use of a Poly-decalactone Polymer offers a potential strategy to improve this limitation because the technological approach for hydrophilic medium polar drugs is less effective. The formulation that had been optimized using the formulation variables was then further optimized using the process variable. Particle size decreased with changes in stirring time and speed. The optimized formulations have a particle size between 583-615 nm; PDI of0.657±1.8, 0.552±1.05, and 0.734±1.51were selected for loading of the drug for final formulations. The particle size and shape of nanoemulsions were not changed after drug encapsulation. the values of NNE1, NNE2, NNE3, and NNE5 formulation were found to be 6.3±0.04, 7.4±0.08, 6.7±0.06, and 7.0±0.09 units only. In all cases, pH showed the smallest changes. The pH value of the optimized nanoemulsion formulation NNE3 was found to be 6.6±0.06. demonstrating its suitability for oral administration. Drug entrapment efficiencies of different formulations i.e. NNE1, NNE2, NNE3, NNE4, and NNE5 were found to be 71.33±1.62%, 82.4±0.24%, 99.95±1.35%, 90.12±0.34%, and 79.03that showed to affect the encapsulation of drug. Stability studies were carried out at 4°C and 25°C.

Keywords: Nisoldipine, Solubility Enhancement, Bioavailability Enhancement, Tween-80

INTRODUCTION

NANOEMULSION

A nanoemulsion is a liquid dispersion comprising two immiscible liquid phases, such as an oil phase and a water phase, The Kelvin effect is responsible for Ostwald ripening,

Int. J. Pharm. Investigation, 2024; 14(4):1085-1095.
https://www.ijpionline.org

Review Article

Recent Advancement in Exosome-Inspired Lipid Nanovesicles for Cell-Specific Drug Delivery

Siva Prasad Sunkara[1], Nihar Ranjan Kar[2], Shaik Kareemulla[3], Koushik Narayan Sarma[4], Komal Umare Thool[5], Manoj Kumar Katual[6], Pydiraju Kondrapu[7,*]

[1]Department of Pharmacy, Chebrolu Hanumaiah Institute of Pharmaceutical Sciences, Chandramouli Puram, Chowdavaram, Guntur, Andhra Pradesh, INDIA.
[2]Department of Pharmacy, Centurion University of Technology and Management, Gopalpur, Balasore, Odisha, INDIA.
[3]Department of Pharmacy Practice, M. M. College of Pharmacy (Maharishi Markandeshwar Deemed University), Mullana-Ambala, Haryana, INDIA.
[4]Department of Pharmacy, Assam Down Town University, Sankar Madhab Path, Gandhi Nagar Panikhaiti, Guwahati, Assam, INDIA.
[5]Department of Electronics and Communication Engineering, Shree Ramdevbaba College of Engineering and Management Nagpur, Maharashtra, INDIA.
[6]Department of Pharmaceutics, University College of Pharmacy, Guru Kashi University, Sardulgarh Road, Talwandi Sabo, Bhatinda, Punjab, INDIA.
[7]Department of Pharmacy, Aditya Pharmacy College, ADB Road, Surampalem, Kakinada, Andhra Pradesh, INDIA.

ABSTRACT

Exosomes are small nanovesicles that are produced through the fusion of multiple veins and plasma membranes, then escaping into adjacent body fluids. Considerable attention has been paid to them due to their potential as delivery vehicles for drugs. Exosomes play a key role in many physiological processes that occur both in healthy and ill states. The production of exosomes depends on the state of the disease, but the disease itself often serves the opposite function by promoting more cell damage and stress. Traditional drug delivery methods often face limitations in terms of specificity, targeted delivery and drug release kinetics. Exosomes have emerged as promising candidates for drug delivery due to their natural ability to selectively deliver cargoes to recipient cells. Exosomes are taken up through various mechanisms, including endocytosis and fusion with target cells. They can encapsulate poorly soluble drugs, enhancing their bioavailability and improving their therapeutic efficacy. Exosomes inspired Lipid Nanovesicles (Exo-LNVs) have shown promising results as drug delivery vehicles. Exosomes have considerable potential as sophisticated vehicle for the delivery of targeted drugs and genes due to their unique characteristics, including inherent stability, minimal immunity and exceptional ability to penetrate tissues and cells. Therapeutic interventions have the capacity to increase effectiveness, reduce side effects and increase patient compliance. Exosomes have the ability to transport various therapeutic by encapsulating different substrates such as nucleic acids, proteins and small molecules. Recent advancements in exosome-inspired lipid nanovesicles have opened up new possibilities for cell-specific drug delivery. These nanovesicles mimic the composition and structure of exosomes, which are naturally occurring extracellular vesicles released by cells. By incorporating therapeutic agents into the lipid nanovesicles, they can effectively target and deliver drugs to specific cell of interest. This review article aims to summarize the current literature on Exo-LNVs and discuss their potential as drug delivery vehicles. A systematic search was conducted to identify relevant studies and relevant data were extracted and analyzed. The review covers various aspects of Exo-LNVs, including their composition, preparation methods and applications in various disease conditions.

Keywords: Exosome, Exo-LNVs, Surface modification, Drug delivery system, Extracellular vesicles, Therapeutic cargo.

Correspondence:
Dr. Pydiraju Kondrapu
Department of Pharmacy, Aditya Pharmacy College, ADB Road, Surampalem, Kakinada-533437, Andhra Pradesh, INDIA.
Email: pydiraju.kondrapu21@gmail.com

Received: 02-02-2024
Revised: 08-03-2024
Accepted: 02-05-2024

INTRODUCTION

The function of drug delivery systems in pharmaceutical science is crucial. Treatment agents are delivered to target cells or tissues through these methods, minimizing systemic toxicity and maximizing effectiveness by preventing non-specific distribution.[1] Over the past decades, remarkable progress and innovations have been made in the field of Drug Delivery Systems (DDS) using nanocarriers and vehicles. Traditional approaches to the delivery of drugs, including oral administration, lead to the dispersion of drugs in the gastrointestinal tract, which results in reduced bioavailability and inconsistent absorption.[2] To overcome these limitations, researchers have developed various drug delivery systems, including nanoparticles, liposomes, hydrogels and nanoparticles. Lipid nanovesicles, also known as

DOI: 10.5530/ijpi.14.4.119

Section A-Research paper

A Brief Review Of Pathophysiology And Management Of Different Types Of Arthritis

Shadab Ali[1]*, Sayad Ahad Ali[1], Pydiraju Kondrapu[2], Nidhi Tripathi[3], Pramod Bhaskar Kumar[4], Dr P. Dharani Prasad[5], Manisha Madhukar Tonape[6], Mr. Pratik P. Terse[7], Muhammed Ameen MP[8], Sunil Kumar[9], Abhisek Saha[10]

[1,2] Assistant Professor, Department of Pharmacy, IIMT College of Medical Sciences, IIMT University, 'O' Pocket, Ganganagar, Meerut, U.P., 250001, India

[2] Assistant Professor, Aditya Pharmacy College

[3] Assistant Professor, Anuragh Memorial College, Katari Hill Road, Gaya 823001

[4] Associate Professor, Shree Devi College of Pharmacy, Airport Road, Kenjar, Mangalore, DK Karnataka 574142

[5] Professor, MB University erstwhile (Sree Vidyaniketan College of Pharmacy) Tirupati 517102

[6] Head of the Department and Associate Professor, Physiotherapy Department, School of Allied Health Science, The Assam Kaziranga University, Koraikowa, Jorhat, Assam 785006

[7] Research Scholar, Madhav University Rajasthan, Pin: 307026

[8] Assistant Professor, Department of Pharmacology, Yenepoya Pharmacy College & Research Centre, Yenepoya (Deemed to be University), Mangaluru-575018

[9] Associate professor, Faculty of pharmacy, P.K.University, Village - Thanra, Teshsil- Karera, Dist: Shivpuri, M.P.- 473665

[10] Associate Professor in Chemistry, Tufanganj College, West Bengal, Pin code 736160

Corresponding Author

Shadab Ali,

Assistant Professor, Department of Pharmacy, IIMT College of Medical Sciences, IIMT University, 'O' Pocket, Ganganagar, Meerut, U.P., 250001, India

shadabali12341234@gmail.com, ahadali75405@gmail.com

Article History: Received: 10/5/2023 Revised: 12/6/2023 Accepted: 14/7/2023

Abstract

Arthritis is derived from the Greek term "disease of the joints." It is defined as an acute or chronic joint inflammation that often co-exists with pain and structural damage. Hereditary and acquired autoinflammatory illnesses have a direct correlation with several inflammasomes. Numerous autoimmune illnesses, including systemic lupus erythematosus (SLE), type 1 and type 2 diabetes, neurological disorders, and cancer, have been linked to excessive inflammasome activation. A frequent kind of systemic autoimmune illness that mostly affects synovial joints is rheumatoid arthritis (RA). Osteoarthritis (OA) is the most common form of arthritis that simultaneously affects the lives of elderly people as well as young individuals suffering post-traumatic injuries. Any articular joint in the body may be affected by this chronic inflammatory

PHYTOCHEMICAL EVALUATION, IN VITRO ANTIOXIDANT ACTIVITY AND IN-VIVO ANTIDIABETIC ACTIVITY OF ACACIA NILOTICA

Nikita A Sadalage[1], Moushumi Baidya[2], Pydiraju Kondrapu[3*], Nitin B Ghiware[4], Archana Pramod Shaha[5], Shiyal Mayur Kalubhai[6], Shailaja Nare[7], Shweta Manjeet Rajput[8]

Article History: Received: 26.04.2023 **Revised:** 21.06.2023 **Accepted:** 19.07.2023

Abstract

In the current study, the total phenolic and flavonoid content, antioxidant activities, and antidiabetic activity of several leaf extracts from Acacia nilotica were assessed. Analysis of the extracts' phytochemical composition was also done. DPPH free radical scavenging experiment was used to calculate antioxidant potential. In comparison to pods and bark, the leaves were shown to have a higher total phenolic content, higher protein content, and higher antioxidant activity. The authors have tried to put all these classes of plants at a common platform so that the data and information of this review could be utilized in drawing strategies for use of medicinal plants in a way that can be extended for future scientific investigation in different aspects. The fact confirmed by reports from the World Health Organization (WHO) shows that India has the largest number of diabetic subjects in the world. Hyperglycemia can be handed initially with oral synthetic agent and insulin therapy. But these synthetic agents produce some serious side effects and are relatively expensive for developing countries. The clinical signs, severity, and treatment of oral antidiabetic drug toxicity vary greatly. Numerous plants have been touted as having therapeutic benefits for the treatment of diabetes mellitus in the natural medical system. Due to availability and affordability, a substantial rural population relies on medicinal herbs to cure their diabetes. Besides hyperglycemia, several other factors including dislipidemia or hyperlipidemia are involved in the development of micro and macrovascular complications of diabetes that are the major causes of morbidity and death. Leaves of ***Acacia nilotica*** used as anti-diabetic, for feeding sheep and goats in the Hissar district in India. In Kenya, the fleshy pods are readily eaten by goats, sheep and cattle, but some tribes believe they cause bloat. As a result, A. nilotica leaf extracts are a potential source of antioxidant and anti-diabetic chemicals.

Keywords: Acacia Nilotica, Hyperglycemia, Diabetes Mellitus, DPPH, Hyperlipidemia, Antidiabetic, Antioxidant.

[1]Assistant Professor, KLE College of Pharmacy (KLE Academy of Higher Education and Research), Belagavi, Karnataka. 590010

[2]Assistant Professor, Bharat Pharmaceutical Technology, Amtali, Agartala, Tripura.799130

[3]Assistant Professor, Aditya pharmacy college ,ADB road ,Surampalem, Kakinada, Andhra Pradesh. 533437

[4]Professor & Head, Department of Pharmacology Nanded Pharmacy College, Shyam Nagar, Nanded, Maharashtra. 431605

[5]Assistant Professor, Vishwakarma University School of Pharmacy, Pune, Maharashtra.

[6]Assistant Professor, Atmiya University, Yogidham Gurukul, Kalawad Road, Rajkot, Gujarat. 360005

[7,8]Assistant Professor, Bharati Vidyapeeth College of Pharmacy, Near Chitranagari, Kolhapur, Maharshtra-416013

[*]Corresponding Author

Pydiraju Kondrapu[3*]

[3*]Assistant Professor, Aditya pharmacy college ,ADB road ,Surampalem, Kakinada, Andhra Pradesh. 533437

DOI: 10.31838/ecb/2023.12.6.211

Eur. Chem. Bull. 2023, 12 (6), 2317 – 2330

Aerva lanata: Roots Extract for the analysis of phytochemicals

Dr. M. Shanmugavadivu[1], Dr. Priyanka Bankoti[2], Dr. Biren N. Shah[3], Tushar Arun Rode[4], Dr Balan Paramasivam[5], Abhisek Saha[6], Ashish Kumar Tiwari[7], Dr. Nihar Ranjan Kar[8], Pydiraju Kondrapu[9]*

[1]*Associate Professor, Dr. N. G. P. Arts and Science College, Coimbatore-641048, Tamil Nadu, India*

[2]*Professor, Shri guru ram rai university Dehradun*

[3]*Professor, Shree Naranjibhai Lalbhai Patel College of Pharmacy, Bardoli Mota Road, Bardoli, Gujara-394345*

[4]*Assistant Professor, P. W. College of Pharmacy, Moha Phata, Dhamangaon Road, Yavatmal. 445001.*

[5]*Professor, The Erode College of Pharmacy, Erode -638112, Tamil Nadu.*

[6]*Associate Professor in Chemistry, Tufanganj College, West Bengal-736160, India*

[7]*Assistant Professor, Krishnarpit Institute of Pharmacy, Iradatganj, Ghoorpur, Prayagraj, Uttar Pradesh, Pin-212107*

[8]*Assistant Professor, Centurion University of Technology and Management, Gopalpur, Balasore, Odisha, India*

[9]*Assistant Professor, Aditya Pharmacy College, Surampalem, India*

***Corresponding Author:Pydiraju Kondrapu,**
Assistant Professor, Aditya Pharmacy College, Surampalem, India
Email: pydikondrapu604@gmail.com

Article History: Received:10/7/23 **Revised: 18/7/23** **Accepted: 25/7/23**

Abstract:

Numerous common illnesses may be prevented or treated with the help of phytochemicals. There is little doubt that identifying and isolating these phytochemicals would benefit human civilisation. Consequently, this research work explores phytochemicals and performs qualitative and quantitative evaluation of the same. The roots of *Aerva lanata* were harvested and extracted using the maceration process using solvents including chloroform, ethyl acetate, methanol, and water. Additional qualitative and quantitative research was conducted on the topic. According to the findings, water, methanol, ethyl acetate, and chloroform had respective concentrations of 2.32%, 2.90%, 8.14%, and 3.44%. The sole substance detected in the chloroform extract was tannin. The phenol and tannin tests for ethyl acetate were positive. The phytoconstituents flavonoid, phenol, and tannin were considerably more abundant in the methanolic extract. The aqueous extract ultimately tested positive for tannin & flavonoid. The *Aerva lanata* extract contains additional classes of phenol and flavonoids in addition to the standard used for comparison, according to the results of TLC for phenol and flavonoid analysis. The methanolic extract of *Aerva lanata* is estimated to have a total phenolic content of 1.380 mg/100 mg, whilst the ethyl acetate and aqueous extracts had phenol contents of 0.866 mg/100 mg and 0.613 mg/100 mg, respectively. Only the methanolic extract's total flavonoid content, which was found to be 1.280 mg/100 mg, was evaluated. *Aerva lanata* root has a large

Endometriosis: A brief review of Pharmacological and Non-Pharmacological Treatment

Sayad Ahad Ali[1]*, Shadab Ali[2], Sameer Rastogi[3], Jhakeshwar Prasad[4], Pydiraju Kondrapu[5], Dr. Bijander Kumar[6], Dr. Aniketa Sharma[7], Kartikey Pandey[8], Dr. Naveen Kumar Choudhary[9]

[1,2] Department of Pharmacy, IIMT College of Medical Sciences, IIMT University, 'O' Pocket, Ganganagar, Meerut 250001

[3] Principal & Dean, School of Pharmacy, Noida International University, Plot No.1, Sector 17 A, Yamuna Expressway, Greater Noida - 203201, Distt. G.B. Nagar, U.P., India

[4] Assistant Professor, Shri Shankaracharya College of Pharmaceutical Sciences, Junwani - 490020, Bhilai, Chhattisgarh, India

[5] Assistant Professor, Aditya Pharmacy College, Surampalem, India

[6] Professor, Mahaveer College of Pharmacy, Meerut

[7] Assistant professor Department of medicine, Dr.YSP GOVT.MEDICAL COLLEGE NAHAN District sirmour H.P Pin 173001

[8] Assistant Professer, Krishanarpit Institute of Pharmacy, Iradiganj Prayagraj

[9] Professor, B R Nahata College of Pharmacy, Mandsaur University, Mandsaur 458001

Corresponding author:Sayad Ahad Ali*

ahadali75405@gmail.com, shadabali12341234@gmail.com

Article History: Received:10/7/23 **Revised: 18/7/23** **Accepted: 25/7/23**

Abstract

Endometriosis is regarded as a spectrum disease with a wide range of subtypes and clinical manifestations. Endometriosis must be found to be present outside of (ectopic) the uterus in order to be defined histologically. These ectopic lesions are frequently found on the peritoneum and pelvic organs. They may occasionally exist in the bladder, kidneys, lungs, and even the brain, among other body organs. Regarding behavioral characteristics, research has been done on the connection between dietary preferences, alcohol and caffeine consumption, smoking, and physical activity in relation to involvement in developing endometriosis. Normal responses to progesterone in the uterine endometrium include suppression of estrogen-dependent epithelial cell proliferation, maturation of the glands' secretory systems, and differentiation of stromal cells into specialized decidual cells. Additionally, progesterone briefly produces the receptive phenotype necessary for embryo implantation in endometrial epithelial cells. Pain is one of its predominant clinical features. Women with endometriosis experience a variety of pain symptoms, most commonly dysmenorrhea, noncyclical pelvic pain, dyspareunia, and dyschezia. The experience of pain, no matter what the underlying disease, involves several different mechanisms and interactions between the periphery and the central nervous system (CNS).

EVALUATION OF ANTIOXIDANT, ANTIDIABETIC AND ANTIHYPERLIPIDEMIC ACTIVITY OF SYZYGIUM CUMINI SEEDS IN DIABETIC ZEBRAFISH MODEL

S. Prema[1], Sarita Sharma[2], Pydiraju Koudrapu[3*], Yogesh Manikrao Kumre[4], Meman Rahil Salim[5], Prabhjot Kaur Khatkar[6], Rajeev Ranjan[7], Mangesh Manikrao Kumare[8]

Article History: **Received:** 27.05.2023 **Revised:** 10.06.2023 **Accepted:** 31.07.2023

Abstract

High blood glucose levels are a prominent feature of the severe chronic degenerative disease known as diabetes mellitus (DM). It is connected to a complete or partial lack of insulin synthesis and/or action. Coronary illness, retinopathy, renal sickness, and neuropathy are a couple of the issues connected to DM; subsequently, new all-regular therapies are being tried to deal with the condition. In this review, we survey the anti-diabetic activity of Spondias purpurea seed methanol remove (CSM) both in vitro and in a zebra fish model of diabetes that has been produced by glucose. This study's goal was to decide the effect of a methanol concentrate of Syzygium cumini (L.) Skeels. Seed on risky microorganisms and diabetes welcomed on by a solitary intraperitoneal infusion of streptozotocin in rodents. S. cumin, a plant used to treat type 2diabetes I frequently used seeds in powered form. Pathogenic bacterial resistance was examined in S. cumin seed methanol extract. When tested against Bacillus subtilis, E. coli, Staphylococcus aureus, and Klebsiella pneumonia, the anti-bacterial activity performed well. Analysis using TLC and HPLC demonstrates the presence of 11 different chemicals. Rat experiments demonstrated that seeds have positive effects on diabetes mellitus.

Keyword: Evaluation of Antioxidants, Antidiabetic, Antihyperlipidemic Activity, Syzygium Cumini Seeds, and Diabetic Zebrafish Model.

[1]Crescent School of Pharmacy, BS Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai. 600048
[2]MM College of Pharmacy, Maharishi Markendeshwer (Deemed to be University), Mullana, Ambala, Haryana. 133207
[3*]Aditya Pharmacy College, ADB Road, Surampalem, Kakinada, Andhra Pradesh. 533437
[4]Shri Ayurveda College & Pakwsa Samanvay Hospital, Hanuman Nagar, Nagpur, Maharashtra. 440024
[5]Ismail Mehta College of Pharmacy, Beed Road Ambad, Jalna, Maharashtra. 431204
[6]Department of Medical Lab Sciences, Guru Nanak Paramedical College, Dhahan Kalaran, Shaheed Bhagat Singh Nagar, Punjab 144505
[7]Univ. Department of Chemistry, DSPM University, Morhabadi, Ranchi, Jharkhand. 834008
[8]Smt. Kusumtai Wankhede Institute of Pharmacy, Dhantoli, Katol, Nagpur, Maharashtra.441302

[*]**Corresponding Author**
Pydiraju Koudrapu[3*]
[3*]Assistant Professor, Aditya pharmacy college, ADB road, Surampalem, Kakinada, Andhra Pradesh. 533437

DOI: 10.31838/ecb/2023.12.6.252

Remittances Review
June, 2023
Volume: 8, No: 4, pp. 929-937
ISSN: 2059-6588 (Print) | ISSN: 2059-6596 (Online)
remittancesreview.com

Received: 11 November 2022 Accepted: 28 March, 2023
DOI: https://doi.org/10.33182/rr.v8i4.65

Formulation Development and Evaluation of Mucoadhesive Patch for Diabetes Using Plant Based Polysaccharides

Anasuya. Patil[1], Nabamita Basu[2], Senthil Prabhu Rajendran[3*], G. Dharmamoorthy[4], Pavankumar Krosuri[5], Pydiraju Kondrapu[6], Arjun Patidar[7], Ashish Suttee[8]

Abstract

Using plant-based polysaccharides, this study created a mucoadhesive patch for diabetes with the goal of delivering regulated medication release and improved therapeutic efficacy through sustained contact with the buccal mucosa. The patches' physicochemical characteristics, drug release kinetics, and mucoadhesive strength were examined after they had been made using the solvent casting procedure. The created patch had exceptional mechanical, flexible, and physical qualities, as well as prolonged drug release and minimized burst release. Through in vitro cytotoxicity tests, the patch's biocompatibility was verified, demonstrating its suitability for buccal administration. To confirm the effectiveness and safety of this unique medication delivery method, additional in vivo research and clinical trials are required. If successful, these studies could pave the way for more individualized and efficient diabetic treatment options.

Keywords: *-Polysaccharides, Mucoadhesive Patch, Diabetes, Formulation, Evaluation, Development.*

1. Introduction

Peptide and protein-based medicines are right now the focal point of medication advancement, making up close to half of the drug business' pipeline meds. This is on the grounds that these macromolecules can join just to their expected targets, diminishing the probability of undesirable aftereffects. Peptide/protein-based meds, then again, require parenteral organization due to their flimsiness in the GIT and restricted penetrability across natural films during oral conveyance. Resistance with infusions presents a serious hindrance for habitually regulated meds like insulin, where inadequate control of diabetes can prompt difficult issues.

To proficiently control helpful proteins/peptides, there have been a few endeavors to make inventive oral conveyance frameworks. The utilization of nanoparticles for insulin conveyance has gotten a ton of consideration as of late. For the oral organization of helpful proteins like salmon calcitonin, exenatide, and insulin, our gathering has been dealing with the advancement of mucoadhesive digestive gadgets. To arrive at the small digestive system, mucoadhesive gadgets are encased in intestinal covered containers created from a mix of mucoadhesive polymers. At the point when ingested, the containers fall to pieces in the stomach, delivering the gadgets, which then append to the digestive mucosa, extend, and step by step discharge their pharmacological burden as the gadget lattice breaks down. The gadgets remember a water-impermeable covering for all sides with the exception of one, which takes into consideration controlled, one-way prescription delivery.

As well as safeguarding the medicine from the stomach's acidic climate, these gadgets block the proteolytic compounds in the GIT from arriving at the medication local, ending the enzymatic obliteration of remedial proteins. The gadgets

[1] Department of Pharmaceutics, KLE College of Pharmacy, II Block Rajajinagar, Bengaluru, Karnataka. 560010
[2] Department of Pharmaceutics, Gokaraju Rangaraju College of Pharmacy, Bachupally, Hyderabad, India. 500090
[3] Department of Pharmaceutics, College of Pharmacy, Madurai, 625020, Affiliated to the Tamilnadu Dr. MGR Medical University, Chennai, Tamilnadu. **Corresponding Author Senthil Prabhu Rajendran**
[4] Department of Pharmaceutical analysis, MB school of Pharmaceutical sciences, Mohan Babu University, Tirupati.
[5] Department of Pharmaceutics, Santhiram College of pharmacy, NH40, Nerrasada, Nandyal, Andhrapradesh, India
[6] Aditya Pharmacy College, ADB Road, Surampalem, Kakinada, Andhra Pradesh. 533437
[7] Sri Aurobindo Institute of Pharmacy, Indore, Madhya Pradesh. 456006
[8] School of Pharmaceutical Sciences, Lovely Professional University, Punjab, India. 144411

RESEARCH ARTICLE

Enhancing pain relief and minimizing infection risk in abdominal surgery: An in-depth comparative investigation

Bhargavi Garaga[1], Haritha Kandavalli[2], Hemalatha Yarra[3], Minisha Nalli[4], Rupa Lavanya Gogulamanda[5], Ratna Kumari Padamati [6], Surendra Nath Botta[7]

[1]*Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[2]*Intern of pharm. D at Aditya pharmacy college, Surampalem, Andhra Pradesh, India*
[3]*Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[4]*Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[5]*Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India*
[6]*Associate Professor in Dept. of Pharmacy Practice at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.*
[7]*Laparoscopic Surgeon at Trust Multispecialty Hospitals, Kakinada, Andhra Pradesh, India*

Publication history: Received on 22nd October; Revised on 20th November; Accepted on 26th November

Article DOI: 10.5281/zenodo.10246777

Abstract: Analgesics and antibiotics are essential for post-operative treatment because an analgesic typically reduces pain after surgery. By using the right antibiotics, surgical site infections (SSI) can be avoided. The purpose of this study is to assess the effectiveness of analgesics and antibiotics in post-operative hernia and cholelithiasis patients in relation to post-operative pain in surgical site infections. This is a prospective observational study and it is conducted for 6month period between November 2022 to April 2023 in surgical ward at Trust Multispecialty Hospitals, Kakinada, Andhra Pradesh. In this study a total of 115 postoperative subjects were selected, hernias are about 75 subjects and cholelithiasis are 40 subjects. Our study results conducted that, preoperative anesthetics and post-operative analgesics helps the subjects to experience moderate pain after surgery. Weak Opioid (Tramadol), narcotic analgesics (Fentanyl), NSAIDs (Aceclofenac), Paracetamol is given for pain relief. Among 115 subjects were treated with prophylactic antibiotics and none of them had developed with surgical site infection. For prophylaxis of SSI Cephalosporins were preferred as antibiotics like Ceftriaxone, Meropenem, Cefotaxim, (Cefoperazone-Sulbactam), (Piperacillin-Tazobactam) respectively. The study reported the concomitant strict usage of Antibiotics have reduced the incidence of Surgical site infections and the pain perception was reported to be low because of combination of Analgesics rather than the Single dosing and the administration of General Anesthesia before the surgery, along with the surgeon skill.

Keywords: Analgesics; Antibiotics; Post-Operative Pain; Surgical Site Infection; Hernia; Cholelithiasis

1. Introduction

Surgery almost often damages the tissue, which results in discomfort poor pain management causes delayed mobility and associated consequences as well as psychological discomfort and worry. Major abdominal operations with upper abdominal incisions induce considerable stomach pain that if not well managed, can result in atelectasis, retention of secretions, shallow breathing, and resistance to physical therapy [1, 2]. 30-80% of patients who have undergone surgery report moderate to severe post-operative pain [3]. Traditionally, systematic analgesics such as opioids, keramine's NSAIDs, alpha 2 agonists, and Paracetamol or epidural anesthesia are used to manage pain during abdominal surgery [4]. After laparoscopic surgery, it's common for the sufferer to describe the pain as being intense, sharp, electronic, and stabbing; [5].

The pain is measured by using; the Universal Pain Assessment Tool (UPAT). The UPAT has a 0-10 number score, where the pain can be assessed based on "the Verbal Descriptor Scale", "Wong Baker Facial Grimace Scale" and "Activity Tolerance" [6].

UPAT is used to interpret the pain level in postoperative stages specifically in two population groups, one who underwent surgery with general anesthesia, and another group who undergone surgery with nerve block. The dose of analgesia to be prescribed postoperatively depends upon the level of pain. Anylomethadone an opioid is a crucial and frequently employed pharmacological therapy for the treatment of postoperative pain.

* Corresponding author: Bhargavi Garaga

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437

Case Report

Beyond the norm: A case report on the unfolding spectrum of acute suppurative thyroiditis leading to abscess formation

Keerthana Gopidalai[1], K L N S Srisurya[1], Jessica Akumarthi[1], Arijit Goswami[1], Sree Jyothsna Midathada[1], Chetan Priyanka Angati[2], Pavan Kumar Yanamadala[2]

From [1]Students of Pharm. D, Department of Pharmacology, Vivekanadha Institute of Pharmaceutical Sciences, Sankyam, Andhra Pradesh, India. [2]Assistant Professor, Department of Pharmacology, Aditya Pharmacy College, Surampalem, Andhra Pradesh, India

ABSTRACT

The thyroid gland's robust defenses, including a rich blood supply, lymphatic drainage, high iodine content, and physical isolation, typically render it resistant to infections. However, acute suppurative thyroiditis (AST) leading to a primary thyroid abscess is an uncommon occurrence, especially among children, accounting for only 0.1–0.7% of thyroid disorders. This case report outlines the clinical presentation of a 12-year-old male with prolonged fever, neck pain, sore throat, and swallowing difficulties. *Staphylococcus aureus* was identified as the causative agent. Treatment involved a combination of intravenous antibiotics and incision and drainage, resulting in a successful recovery. Despite its rarity, AST requires prompt recognition and intervention to prevent complications. This case emphasizes the significance of including AST in the differential diagnosis of neck swelling and underscores the necessity for early identification and appropriate management to ensure optimal patient outcomes.

Key words: Abscess, Lymphatic drainage, Neck swelling, Pyriform sinus fistula, *Staphylococcus aureus*, Thyroiditis

A thyroid abscess resulting from acute suppurative thyroiditis (AST) is an infrequent clinical occurrence. AST accounts for merely 0.1–0.7% of thyroid disorders, and within surgically treated thyroid diseases, only a minimal percentage, ranging from 0.1% to 0.7%, manifests as thyroid abscess secondary to AST [1]. This condition primarily affects individuals with existing thyroid gland pathologies, including thyroid cancer or Hashimoto's thyroiditis, and is associated with localized anatomical abnormalities, particularly in the pediatric population. Although bacterial infections represent the predominant etiology of AST, alternative causes encompass fungal, mycobacterial, and parasitic infections. AST typically manifests with common indicators such as erythema, pain, and discomfort that can radiate to the jaw, occiput, or ear on the affected side [2]. The resultant abscess has the potential to exert pressure on the trachea, esophagus, or recurrent laryngeal nerve. Progressive deterioration of the condition is marked by systemic symptoms, including fever, chills, and malaise, in the majority of patients [3].

In this case report, we present a noteworthy instance of thyroid abscess resulting from AST in a 12-year-old male patient, shedding light on the clinical presentation, diagnostic considerations, and the successful management approach adopted. This case underscores the importance of recognizing and promptly addressing AST complications, particularly the formation of a thyroid abscess, to achieve favorable patient outcomes and prevent potential morbidity and mortality associated with this uncommon thyroid disorder.

CASE REPORT

A 12-year-old male presented with symptoms including fever, painful neck swelling, sore throat, and dysphagia persisting for 4–8 days. In addition, he had a preceding history of mild fever and sore throat for the past 10 days. Clinical examination revealed a tender, warm, diffuse midline swelling in the thyroid region, accompanied by erythema on the overlying skin.

His vitals are as temperature recorded at 99.9°F, heart rate 110 bpm, respiratory rate 18 breaths/min, and normal levels of blood pressure. The swelling exhibited movement with deglutition and associated findings included tachycardia and restricted neck movements. The patient had a positive history of Brucellosis, which had been reportedly fully treated 2 months prior.

Laboratory investigations showed a leukocyte count of 14,300 with 70% polymorphs, a hemoglobin level of 12.9 g/dL, and

Access this article online

Received - 24 December 2023
Initial Review - 12 January 2024
Accepted - 26 February 2024

DOI: 10.52711/2321-4449

Quick Response code

Correspondence to: Dr. Pavan Kumar Yanamadala, Aditya Pharmacy College, Surampalem - 533 437, Andhra Pradesh, India. E-mail: pavanyanamadala@gmail.com

Asian Journal of Research in Medical and Pharmaceutical Sciences

Volume 12, Issue 4, Page 173-182, 2023; Article no.AJRIMPS.110031
ISSN: 2457-0745

Unraveling Medication Complexity in the Elderly: A Critical Assessment of Adherence Implications

Pavan Kumar Yanamadala [a++*], Nandini Palivela [a#], Aleena Roy [a#], Hemalatha Yarra [a#], Jessi Peruri [a#], Rupa Lavanya Gogulamanda [a#], Priyanka Kandregula [a#] and Minisha Nalli [a#]

[a] Aditya Pharmacy College, Surampalem-533437, Andhra Pradesh, India.

Authors' contributions

This work was carried out in collaboration among all authors. Author PKY formulated the study protocol and finalized the title and performed Methodology for the study. Authors NP and AR prepared the questionnaire form, and the data collection form required for the study. Authors HY and JP collected the cases, interviewed the patients and did all the necessary data-filling work. Authors RLG and PK have done the statistical analysis and drafted the manuscript. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJRIMPS/2023/v12i4240

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/110031

Original Research Article

Received: 27/09/2023
Accepted: 03/12/2023
Published: 13/12/2023

ABSTRACT

Background: Chronic illnesses often affect grown-ups over 60 years of age, leading to inadequate and impecunious medication adherence, which increases the risk of bleakness, hospitalization, and mortality, despite the irrefutably factual benefits of certain medications.
Aim and Objectives: To appraise the degree of drug intricacy in older patients with chronic diseases and to break down the factors impacting drug adherence among them.

** Assistant Professor;
* Interns of Pharm D;
*Corresponding author: E-mail: pavan.yanamadala@gmail.com;

Asian Journal of Case Reports in Medicine and Health

Volume 6, Issue 1, Page 166-171, 2023; Article no.AJCRMH.107568

Primary Neural Tube Defects in Pediatrics – A Focus on Lipomeningocele

Thanmayi Sai Lakshmi Thota [a++], Yati Raj [a++], Madhuri Akasapu [a++], Hemalatha Yarra [a++], Nandini Palivela [a++] and Pavan Kumar Yanamadala [a#*]

[a] Aditya Pharmacy College, Surampalem-533437, India.

Authors' contributions

This work was carried out in collaboration among all authors. Author TSLT collected the case from the Pediatric Ward and wrote the abstract and the case presentation write-up of the case report. Authors YR and MA helped in Analyzing and constituting the Introduction, Discussion, and Conclusion part of the case report. Authors HY and NP managed the literature searches and guided the remaining authors in the preparation of the manuscript. All authors read and approved the final manuscript.

Article Information

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/107568

Case Study

Received: 02/08/2023
Accepted: 06/10/2023
Published: 11/10/2023

ABSTRACT

Background: Lipomeningocele is a congenital abnormality of the neural tube. It affects approximately one in every 50,000 infants. This is one of the most uncommon varieties of Spina bifida, which happens when a neural tube does not shut completely and sticks out of the Spinal column, forming a sack beneath the skin. During embryonic development, about day 21 or week 3, neural folds fuse to form a neural tube and form a complete neural tube on the 28th day. The unfused part of the spinal cord leads to Spina bifida. Getting enough folic acid, during pregnancy can help to prevent neural tube defects. Mothers who are obese, have poorly controlled diabetes,

** Students of Pharm. D;
* Assistant Professor;
*Corresponding author: E-mail: pavan.yanamadala@gmail.com;

IJMPR 2023, 7(10), 71-76

International Journal of Modern Pharmaceutical Research

www.ijmpronline.com

ISSN: 2319-5878
IJMPR
Research Article
SJIF Impact Factor: 5.273

UNRAVELING THE BIOLOGICAL REVOLUTION: UNCOVERING MENSTRUATION AND PUBERTY

Sri Krishnaveni Balla[1], Kavya Naga Praveena Jakka[2], Dipchand Shit[3], Koppisetti Ishwarya Vani[4], Keerthana Gopidalai[5] and Dr. Pavan Kumar Yanamadala*[6]

[1,2,3,4]Students of Pharm. D at Aditya Pharmacy College, Surampalem-533437, India.
[5]Student of Pharm. D at Viswanadha Institute of Pharmaceutical Sciences College, Sontyam-531173, India.
[6]Assistant Professor at Aditya Pharmacy College, Surampalem-533437, India.

Received on: 15/08/2023
Revised on: 05/09/2023
Accepted on: 25/09/2023

***Corresponding Author**
Dr. Pavan Kumar Yanamadala
Assistant Professor at Aditya Pharmacy College, Surampalem-533437, India.

ABSTRACT

Menstrual health is an essential yet often neglected aspect of adolescent girls' overall well-being, particularly in rural areas with limited access to proper hygiene facilities, education, and healthcare services. This community-based survey attempts to address the various obstacles regarding menstrual health in rural regions and suggests ways to improve adolescent girls' well-being. This survey used a cross-sectional study design to assess the knowledge of menstruation and puberty in 200 girls aged 10–16 years who attained menarche. Several young adolescent girls answered the questionnaire, and their responses were recorded using a data collection form. The data collection form includes information regarding menstruation and puberty, such as initial symptoms, menstrual cycle duration, and menstrual hygiene. Approximately 16 survey questions and responses were analysed. Each accurate response received one point, while inaccurate responses received none. According to the study, only 22% of young girls were aware of the signs of puberty, whereas 78% of those who had experienced menarche were unaware of the same which may be attributed to various factors. Among the study population, 35% hold the view that healthcare professionals are the best advisors on menstruation and puberty. This research highlights the need to prioritize menstrual health among adolescent females in rural locations and this work's broader aim is to promote a healthier and more equitable future for young girls by recognizing the issues and suggesting culturally relevant solutions, ensuring that they can navigate adolescence with dignity and confidence.

KEYWORDS: Menstrual Education, Puberty Education, Adolescent Health, Menstrual Hygiene Management, Menstrual Stigma, Menstrual Myths.

INTRODUCTION

Menstrual health is a crucial aspect of general well-being, yet it is still a problem that is often ignored and judged, especially in rural areas. Teenage girls experience enormous challenges when it comes to maintaining their menstrual health in many parts of the world, particularly in isolated rural areas. The challenges young girls face are made worse by a lack of information, basic sanitation, and period hygiene supplies.[1]

The principal objective of this research investigation is to gain some insight into the multiple issues that adolescent girls in rural regions experience when it comes to menstruation health and to provide effective measures for advancement. This study aims to provide insights into the overall necessities of these girls by exploring the socio-cultural circumstances, financial obstacles, and infrastructure limitations that result in menstrual-related issues.

Adolescent girls come across numerous problems, which include inadequate sanitation facilities, limited access to menstrual hygiene products, and social restrictions that promote myths and prevent open conversations. These obstacles add up to a cycle of disempowerment, which impacts not only physical health but also education, self-esteem, and future possibilities.[2,3]

The purpose of this research work is to provide advantageous perspectives in both academic and practical fields. This research focuses on beneficially affecting the lives of numerous adolescent girls who deserve better menstrual health and the opportunities that come with it through improving knowledge regarding the issues at hand as well as revealing long-term solutions.

It is to magnify the voices of these adolescent girls to acquire a greater understanding of their experiences, utilizing rigorous data collection methods such as surveys, interviews, and case studies. We hope to develop an inclusive approach that ensures the long-term viability

RESEARCH ARTICLE

Managing the dual burden: Pharmacoepidemiological insights into anti-diabetic and anti-hypertension medication use

Lakshmi Renuka Chikkala*[1], Priyanka Kandregula[2], Naruttam Debnath[3], Bipin Sah[4], Ratna Kumari Padamati[5], Phani Ramana Bhushan M[6].

[1] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India
[2] Intern of pharm. D at Aditya pharmacy college, Surampalem, Andhra Pradesh, India
[3] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India
[4] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India
[5] Associate Professor at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India
[6] General Physician at Trust Multi-specialty Hospitals, Kakinada, Andhra Pradesh, India

Publication history: Received on 22nd October; Revised on 20th November; Accepted on 26th November

Article DOI: 10.5281/zenodo.10246766

Abstract: The most prevalent non-communicable diseases that need long-term therapy include hypertension and diabetes mellitus. Mortality and morbidity rates increase when diabetes and hypertension are present together. These disorders must be taken into consideration in order to manage them successfully when they coexist. Both diabetes and hypertension are most likely to develop macrovascular and microvascular complications. Tight control of blood pressure is more helpful in diabetic-hypertensive patients than tight control of blood glucose levels. This study aims to learn about anti-diabetic and anti-hypertensive drug therapy, clinical outcomes, and how combination therapy affects the clinical outcome of diabetes with hypertension. It was a prospective single-centered observational study conducted among 300 Diabetic-Hypertensive patients. The mean age of the study was 58.8 years. According to this study, 56% were males and 44% were females. The commonly observed comorbidity conditions along with diabetes and hypertension were CKD (20.6%), UTI (15%), and Neuropathic diabetes (14%). The most affected occupations with diabetes and hypertension were Private Jobs (31%), Retired Employees (21%), and Homemakers (20%). The most prescribed drugs in diabetic-hypertensive patients were Metformin (7%), Metoprolol (11.7%), Metoprolol with Cilnidipine (5.6%), Metformin with Glimepiride (8.4%), Olmesartan with Amlodipine and Hydrochlorothiazide (8%), and Glimepiride with Metformin and Voglibose (6.3%). The conclusion of this study, males were more affected by diabetes and hypertension and mostly observed in the elderly. The anti-diabetic combination therapy and its clinical outcome are not associated with each other. The anti-hypertensive combination therapy and its clinical outcome are associated with each other.

Keywords: Diabetes mellitus; Hypertension; Monotherapy; Combination therapy; Anti-Hypertension drugs; Anti-Diabetic drugs

1. Introduction

Diabetes and hypertension are the most prevalent non-communicable diseases that are frequently seen together. When compared to normotensive and non-diabetic individuals, the co-existence of diabetes with hypertension is associated with a considerably higher risk (two-to-four-fold times) of cardiovascular disease, end-stage renal disease and mortality [1]. Diabetes mellitus is a carbohydrate metabolic disorder characterized by the body's reduced capacity to generate or respond to insulin and maintain normal blood sugar levels [2]. Systemic arterial hypertension (also known as hypertension) is characterized by persistently high blood pressure in the systemic arteries [3].

In India, an estimated 77 million individuals are diabetic and about 25 million are pre-diabetics (with a higher risk of getting diabetes) [4]. According to researchers, this number will rise to 134 million by 2045. Males get diabetes at a rate of 55.5% after age 20. Females account for 64.6% of the total [5]. India has one of the highest rates of hypertension prevalence, with about 30%of the Indian population suffering from hypertension [6]. It is estimated that one in every four people in India has hypertension [7]. But only approximately 12% of them have their blood pressure under control [8].

Diabetes is associated with both macrovascular (involving vessels such as arteries and veins) and microvascular (involving small vessels, such as capillaries) complications. Hypertension is an important risk factor for [illegible] vascular complications

* Corresponding author: Lakshmi Renuka Chikkala

International Journal of Medical and Pharmaceutical Case Reports

Volume 16, Issue 4, Page 69-75, 2023; Article no.IJMPCR.108704
ISSN: 2394-109X, NLM ID: 101648033

A Rare Neurological Sequela: Pontine Infarct Conducing to Millard-gubler Syndrome

Hema Ratna Sai Lakshmi Vemana [a++], Nisar Ahmed [a++], Bhagya Aruna Chikkala [a++], Rupa Lavanya Gogulamanda [a++], Priyanka Kandregula [a++], Minisha Nalli [a++] and Pavan Kumar Yanamadala [a#*]

[a] Aditya Pharmacy College, Surampalem-533437, India.

Authors' contributions:

This work was carried out in collaboration among all authors. Authors HRSLV and NA gathered the case from emergency ward and author HRSLV arranged the theoretical and the presentation review of the case report. Author NA aided in reviewing the literature part and authors BAC and RLG chipped away at the case show alongside the remaining writers. Authors PK and MN aided in drafting the presentation, discussion, and summarized the conclusion part of the case report. Author PKY alongside author RLG dealt with the literature Searches and other authors in the arrangement of the manuscript. Every one of the Authors read and supported the last original copy. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/IJMPCR/2023/v16i4353

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/108704

Case Study

Received: 04/09/2023
Accepted: 08/11/2023
Published: 15/11/2023

[a++] Students of Pharm. D;
[a#] Assistant Professor;
**Corresponding author. E-mail: pavan.yanamadala@gmail.com;*

International Journal of Medical and Pharmaceutical Case Reports

Volume 16, Issue 4, Page 99-104, 2023; Article no.IJMPCR.110464
ISSN: 2394-109X, NLM ID: 101648033

Beyond the Usual Suspects: Emerging Insights into Takayasu's Arteritis and Its Role in Secondary Hypertension

Jessi Peruri [a++], Harshitha Manasa Koppuravuri [b#], Hemalatha Yarra [a++], Lohitha Sri Sowmya Nomula [b#], Minisha Nalli [a++], Priyanka Kandregula [a++] and Pavan Kumar Yanamadala [a†*]

[a] Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[b] Shri Vishnu College of Pharmacy, Bhimavaram, Andhra Pradesh, India.

Authors' contributions

This work was carried out in collaboration among all authors. Author JP gathered the case from the emergency ward. Authors HMK and LSSN arranged the theoretical and the presentation review of the case report. Author HY aided in reviewing the literature part. Authors MN and PK chipped away at the case presentation alongside the remaining authors. Authors HMK and LSSN aided in drafting the presentation, discussion, and summarized the conclusion part of the case report. Author PKY alongside author JP dealt with the literature searches and other authors in the arrangement of the manuscript. All authors read, supported and approved the final manuscript.

Article Information

DOI: 10.9734/IJMPCR/2023/v16i4358

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/110464

Case Report

Received: 02/10/2023
Accepted: 09/12/2023
Published: 28/12/2023

** Interns of Pharm. D;*
* *Students of Pharm. D;*
† *Assistant Professor;*
**Corresponding author: E-mail: pavan.yanamadala@gmail.com;*

JOURNAL OF PHARMA INSIGHTS AND RESEARCH

RESEARCH ARTICLE

A Holistic study on demographics and cardiac imaging in cardiac implantable electronic device users

Aleena Roy*[1], Nandini Palivela [2], Jessi Peruri [3], Kasturi De[4], Anurag Rajkonwar[5], Ratna Kumari Padamati[6], Chandramouli S Mantravadi[7]

[1] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[2] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[3] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[4] Assistant Professor at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India
[5] Intern of Pharm. D at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[6] Associate Professor at Aditya Pharmacy College, Surampalem, Andhra Pradesh, India.
[7] Consultant Cardiologist at Trust Multi-speciality Hospitals, Kakinada, India.

Publication history: Received on 22nd October; Revised on 20th November; Accepted on 26th November

Article DOI: 10.5281/zenodo.10246792

Abstract: Worldwide there were reportedly 1.14 million pacemaker implantations starting around 2022. The number is supposed to ascend by 1.48 million by the year 2027. The remarkable ascent in pacemaker implantation throughout the course of recent many years might be credited to the aging population and the extension of pacing signs, for example, complete heart block and congestive cardiovascular breakdown. The embedded cardiovascular pacemakers have progressed from clear, non-programmable, non-coordinated ventricular pacing to complex multi-programmed double chamber and biventricular gadgets. Goals: The ongoing review plans to give point by point data with respect to segment profiles, ECG qualities, and 2D Reverberation discoveries of patients who went through pacemaker implantation. We conducted single centered focused, ambi-directional, cross-sectional study in a Tertiary care hospital, Kakinada with the data of 118 subjects for a review time of 1 year. 112 were signed up for our review while the leftover 6 were passing cases and individuals with positively no interest in cooperation. Results: Among 112 subjects, the larger part 38 (40%) subjects were determined to have Total heart block followed by Congestive cardiovascular breakdown 27 (24%). According to ECG irregularities, 41 (37%) subjects had total AV block followed by 36 (32%) subjects who were determined to have sick sinus syndrome. conclusion: The subjects with severe left ventricular ejection fraction are highly recommended to go through gadget implantation straightaway. The number of patients getting long-lasting pacemakers, Implantable Cardioverter defibrillators, and cardiovascular resynchronization treatments has expanded as a result of advancements that save lives, improve the quality of life and lower mortality.

Keywords: Cardiac Implantable Electronic Device; Cardiac Resynchronization Therapy; Complete Heart Block; ECG abnormalities; Implantable Cardioverter Defibrillator; Left Ventricular Ejection Fraction

1. Introduction

The term Cardiac Implantable Electronic Device is basically used to refer to all kinds of implantable medical equipment which mainly comprises pacemakers, cardiac defibrillators, specialized pacemakers, and defibrillator models. Pacemakers are compact electronic medical devices that detect electric impulses from electrodes and deliver electric stimulation as required. The aim of cardiac pacing is to maintain a healthy heart rate [1-2]. Pacemaker insertion is mainly performed in cardiac catheter laboratories by a team of health care experts comprising the consultant cardiologist, cardiac technician, cardiac nurse, and radiographer. The procedure is mostly carried out under local anesthesia and the left subclavian vein route is mostly preferred [3].

Bradyarrhythmias and tachyarrhythmia are treated with modern pacemaker devices, which are sometimes paired with implantable defibrillators [4].

2D ECHO findings of patients who underwent pacemaker implantation. The need to research the outcomes, and patient experiences is greater than ever due to the rising number of cardiovascular patients Devices that preserve synchronization between atria and ventricles are recommended in elderly patients. Adults with pacemakers are typically installed to address fascicular blocks, acquired atrioventricular blocks, and sinus node dysfunction. Additionally, efficient in the treatment and prevention of a few types of neurocardiogenic syncope and tachyarrhythmia. Recent studies have demonstrated that biventricular pacing is a successful treatment for advanced heart failure in patients with substantial intraventricular conduction [5]. Most [illegible] are composed of

* Corresponding author: Aleena Roy

JOURNAL OF PHARMA INSIGHTS AND RESEARCH

RESEARCH ARTICLE

Assessing emergency contraception awareness among married women in primary health centers within East Godavari villages

Manikanta Reddy Vatrapu[1], Samya Janipalli[1], Sai Lakshmi Bora[1] Jahnavi Chandana[1], Pavan Kumar Yanamadala*[2]

[1] *Pharm. D Student, Department of Pharmacy Practice, Aditya Pharmacy College, Surampalem-533437, India*

[2] *Assistant Professor, Department of Pharmacy Practice, Aditya Pharmacy College, Surampalem-533437, India*

Publication history: Received on 30th October; Revised on 27th November; Accepted on 2nd December

Article DOI: 10.5281/zenodo.10396959

Abstract: This study aims to evaluate the awareness and comprehension of emergency contraception among adult married women attending Primary Health Centers (PHCs) in the villages of the East Godavari Region, Andhra Pradesh. A cross-sectional survey approach was employed, involving 386 married women aged 18 to 45. Exclusions comprised single women, those above 45, and those unwilling to participate. Multistage random sampling was utilized. Among the 386 participants, 53.5% were aged 30-40, with ages ranging from 23 to 44. Most had education up to the secondary level (53.7%). Approximately 57% were aware that unprotected intercourse could lead to unintended pregnancy. The mean knowledge score was 27.5%, with only 15.3% scoring above 60%. Age, number of offspring, education, employment, and monthly family income were significantly correlated with knowledge levels. Findings reveal limited awareness of emergency contraception, with higher knowledge among women aged 21-29 (31.5%), post-graduates (21.2%), employed individuals (19.5%), and families earning over 15,000 INR monthly (41.3%). Emphasizing education and promoting emergency contraception use is crucial based on our results.

Keywords: Contraception; Pregnancy; Quality of life; Menstrual health; Emergency pills

1. Introduction

Emergency contraception (EC) should be promptly administered as it stands among the most effective measures for preventing unintended pregnancies [1]. The controlled and efficacious post-coital application of a pharmaceutical or contraceptive device to avert pregnancy is denoted as emergency contraception. Emergency contraception assumes a crucial role in preventing undesired pregnancies [2], a pervasive global clinical concern. Annually, approximately 79 million unintended pregnancies occur worldwide, stemming from inefficient contraceptive usage, widespread misconceptions, and inadequate awareness of EC, culminating in terminated pregnancies. Emergency contraceptive pills (ECPs) act by delaying ovulation, the release of an egg during the menstrual cycle. Notably, ECPs do not impede pregnancy if fertilization and implantation have already transpired [3, 4, 5]. Several options for emergency contraception exist, including progestin-only tablets, combination estrogen and progestin pills, and post-coital insertion of intrauterine devices. This entails either taking two doses of combined estrogen and progestin pills or two doses of 0.75 mg of Levonorgestrel (progestin alone) within 12 hours after unprotected intercourse, demonstrating an 85% success rate. Alternatively, the copper-T intrauterine device (IUD) can be inserted up to five days post-intercourse, boasting a nearly 100% success rate. It is imperative for women to comprehend and employ these varied methods, each requiring distinct dosages for efficacy [6]. Emergency contraception may be required by any woman or girl of reproductive age to avert unintended pregnancies. The utilization of emergency contraception is not medically contraindicated, and age imposes no restrictions. Contraindications for oral EC typically include ongoing pregnancy, intolerance to any component, and undiagnosed abnormal vaginal bleeding [7]. Women should be educated on the diverse methods and their application for EC. Global variations in EC knowledge and usage are apparent, with 80% of physically active females aged 14 to 49 in 45 countries having utilized EC at some point [8]. Recognizing a gap in knowledge regarding EC among married women, this study endeavors to address this by assessing awareness and understanding of emergency contraception among adult married females attending Primary Health Care Centers in East Godavari. The study further aims to evaluate prior EC utilization among this demographic and explore the relationship between sociodemographic factors of adult married females and their knowledge and awareness of emergency contraception, building upon previous literature that has investigated EC knowledge [9-14].

2. Methodology

A qualitative cross-sectional study was initiated to assess married adult women, aged 18 to 45, attending Primary Health Centers (PHCs) in the East Godavari District of Andhra Pradesh. The pri[illegible]opulation included marri[illegible] women within the

* Corresponding author: Pavan Kumar Yanamadala

WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 12, Issue 7, 732-764. Research Article ISSN 2277– 7105

QUANTIFYING THE PREVALENCE AND INTERDEPENDENT RELATIONSHIPOF PCOD, OBESITY, AND DEPRESSION – A PROSPECTIVE OBSERVATIONAL, POLYCENTRIC STUDY

Dr. Pavan Kumar Yanamadala*[1] and Nallaparaju Lalitha Sanjana[2]

*[1]Assistant Professor At Aditya Pharmacy College, Surampalem,East Godavari District, Andhra Pradesh, India.

[2]Intern of Pharm. D At Aditya Pharmacy College, Surampalem,East Godavari District, Andhra Pradesh, India.

Article Received on
13 March 2023,

Revised on 02 April 2023,
Accepted on 23 April 2023

DOI: 10.20959/wjpr20237-27985

***Corresponding Author**
Dr. Pavan Kumar Yanamadala
Assistant Professor At Aditya Pharmacy College, Surampalem, East Godavari District, Andhra Pradesh, India.

ABSTRACT

The most prevalent endocrinopathy, polycystic ovarian syndrome (PCOS), affects about 11.2% of women of reproductive age and is linked to metabolic disease and reproductive failure. According to the Indian Fertility Society's research from 2014, the prevalence of PCOD in India ranges from 3.7% to 22.5%. Due to the high frequency and numerous problems of PCOS, which include ovarian and menstrual disorders, infertility, hirsutism, and metabolic & psychiatric diseases, it significantly burdens the nation's healthcare system and the quality of life of the patients. A polycentric, prospective, observational, cross-sectional study involving 300 women with PCOS/PCOD was carried out, in which the study subjects were divided into three age groups (15–25 years, 26–35 years, and 36–45 years). The study's major goal was to determine the prevalence of obesity and depression in women with PCOS/PCOD and to compare it between married and unmarried women with the same condition. Clinical consequences are more common in PCOD than in other conditions. In this study, depression and BMI were examined. The subject's socioeconomic status and clinical symptoms were elicited using a semi-structured questionnaire. Using the Hamilton Depression (HAM-D) rating scale, the severity of the depression was evaluated. For various age groups, it was determined that irregular menstrual periods (68.33%), infertility (28.33%), acne (44.6%), hirsutism (52.6%), and Acanthosis Nigricans (30%) were statistically significant. This study's participants had obesity prevalence rates of 61% and depression prevalence rates of 67%.

Asian Journal of Case Reports in Medicine and Health

Volume 6, Issue 1, Page 172-178, 2023; Article no.AJCRMH.108234

HELLP Syndrome: A Rare but Critical Obstetric Conundrum

Madhuri Akasapu [a++], Sri Satya Manogna Naidu Vanarasi [a++], Pavan Kumar Yanamadala [a#*], Rupa Lavanya Gogulamanda [a++], Thanmayi Sai Lakshmi Thota [a++], Nandini Palivela [a++] and Bhagya Aruna Chikkala [a++]

[a] Department of Pharmacy Practice, Aditya Pharmacy College, Surampalem-533437, India.

Authors' contributions

This work was carried out in collaboration among all authors. Authors MA and SSMNV gathered the case from emergency ward and author MA arranged the theoretical and the presentation review of the case report. Author SSMNV aided in reviewing the literature part and authors PKY and RLG chipped away at the case show alongside the remaining writers. Authors TSLT and NP aided in drafting the presentation, discussion, and summarized the conclusion part of the case report. Author BAC alongside author SSMNV dealt with the writing searches and other authors in the arrangement of the manuscript. All authors read and approved the final manuscript.

Article Information

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/108234

Case Study

Received: 15/08/2023
Accepted: 20/10/2023
Published: 26/10/2023

ABSTRACT

Background: HELLP Syndrome is one of the significant difficulties of pregnancy and the acronym represents H=Hemolysis, EL=Elevated Liver Enzymes, LP=Low Platelets. It is a significant and hazardous type of toxemia, which is a condition where a pregnant lady has hypertension that harms the Liver and Kidney. It typically develops between the 26th to 40th long stretches of Fetal

++ *Students of Pharm. D;*
\# *Assistant Professor;*
**Corresponding author: E-mail: pavan.yanamadala@gmail.com;*

Journal of Cardiovascular Disease Research

ISSN: 0975-3583,0976-2833 VOL 14, ISSUE 07, 2023

Screening and discovery of novel carbamate compounds for cancer therapy

Dr. Lavanya Yaidikar[1], Pydiraju Kondrapu[2], Astha Mishra[3], Pramod Bhaskar Kumar[4], Dr. Arshad Ahmad[5], Dr. Shaima K A[6], Dr. Chamaraja N A[7], Dr. Shubhangi Tripathi[8]*

[1] Professor, Seven Hills College of Pharmacy, Tirupati-517561, Andhra Pradesh
[2] Assistant Professor, Aditya pharmacy college, Surampalem, ADB road, kakinada district, A.P. 533437
[3] Assistant Professor, Sagar institute of technology and management department of pharmacy
[4] Associate Professor, Shree Devi College of Pharmacy, (RGUHS, Karnataka), Airport road,Kenjar,Mangalore,DK 574142,Karnataka
[5] Professor, NGI College of Pharmacy, Modipuram Meerut UP- 250110
[6] Associate Professor, Shambhunath Institute of Pharmacy, Jhalwa, Prayagraj, Uttar Pradesh 211012
[7] Assistant Professor, Department of Chemistry, JSS Academy of Technical Education (Affiliated to Visvesvaraya Technological University, Belagavi), Dr.Vishnuvardhan Road, Bengaluru 560 060, India
[8] Assistant Professor, J. N. L. College, Khagaul, Patna 801105, Patliputra University, Patna

***Corresponding Author Details:Dr. Shubhangi Tripathi**

drshubhangitripathi@gmail.com

ABSTRACT

A 33 KDa serine hydrolase enzyme known as monoacylglycerol lipase is associated with a number of physiological processes in people, including pain, inflammation, and neurodegenerative diseases. The enzyme has been discovered to be associated with the endocannabinoid lipid signalling network system and has been found to be present in both the central and peripheral nervous systems. Enzyme support the growth of cancer and tumour cells by acting as a source of free fatty acids. It has been noted that the enzyme's activity is elevated in dividing and expanding cells in a number of cancer types. The signalling molecules phosphotidic acid, lysophosphatidic acid, sphingosine phosphate, and prostaglandin E2 are found to be free fatty acid-derived and have been linked to the proliferation, migration, and survival of cancer cells. They also rise as a result of enzyme activity. In the current work, we have carried out the identification task and screening investigation for the newly developed carbamate derivatives as anti-cancer moieties using docking and other computational tools.

Keywords: Enzyme, Inhibitors, Monoacylglycerol, Lipase, Cancer, Inflammation.

Introduction

The Monoacylglycerol Lipase (MAGL), a membrane-bound serine hydrolase (Castelli et al., 2020; Jiang & Van Der Stelt, 2018; Malamas et al., 2020; L. Zhang et al., 2019) prevalent in peripheral organs such as the liver, kidney, testis, lungs, prostate, and small intestine as well as the central nervous system, is crucial to the endocannabinoid system (Dato et al., 2020). The endocannabinoid system (eCB) is a lipid signalling network that has been discovered to be present in both the central and peripheral nervous systems (Z. Chen, Mori, Fu, et al., 2019;

Journal of Cardiovascular Disease Research

ISSN: 0975-3583,09.76-2833 VOL14, ISSUE 07, 2023

A Concise Review of Natural Derivatives for Breast Cancer Treatments

Jhakeshwar Prasad[1], Tushar Arun Rode[2], Dr. Pradeep C. Dave[3], Rashmi[4], Talquees Ahmad[5], Pydiraju Kondrapu[6], Rajeev Ranjan[7], Ms Ishwari R Chaudhari[8], Dr. Shubhangi Tripathi[9]*

[1]Assistant Professor, Shri Shankaracharya College of Pharmaceutical Sciences, Junwani - 490020, Bhilai, Chhattisgarh, India

[2]Assistant Professor, P. W. College of Pharmacy, Moha Phata, Dhamangaon road, Yavatmal. (MS) 445001.

[3]Associate Professor and Head, Department of Biochemistry, Bharati Vidyapeeth ((Deemed to be University) Dental college and Hospital, Sec-7, C. B. D Belpada, Opp. Kharghar ((Station), Navi Mumbai -400614

[4]Assistant Professor, Shri Shankaracharya College of Pharmaceutical Sciences, Junwani - 490020, Bhilai, Chhattisgarh, India

[5]Assistant Professor, Mesco Institute of Pharmacy, Amroha

[6]Assistant Professor, Aditya Pharmacy College, Surampalem, India

[7]Assistant Professor, Univ. Department of Chemistry, DSPM University, Ranchi-834008

[8]Assistant Professor, Pataldhamal wadhwani college of Pharmacy, Moha Phata yavatmal/SGBAU Amravati University, Pin code 445001

[9]Assistant Professor, J. N. L. College, Khagaul, Patna 801105, Patliputra University, Patna

***Corresponding Author Details:Dr. Shubhangi Tripathi,**
drshubhangitripathi@gmail.com

ABSTRACT:

Introduction: Cancer kills most of the people. Breast cancer will have the highest cases in 2020. Geography, genetics, hormones, oral contraceptives, and lifestyle may cause breast cancer, which may be treated in many ways. Radiation, chemotherapy, hormone treatment, and immunotherapy for breast cancer. Due to non-selectivity, multidrug resistance, and bioavailability, standard breast cancer treatments need to be enhanced. **Aim:** This review's main goal is to provide information about effective natural cancer treatments. **Method:** All the data were collected from published paper which are indexing in SCOPUS, Web of Science and UGC. **Result and Conclusion:** In recent decades, efforts have been made to find anticancer drugs based on phytochemicals. In order to better understand phytochemicals as possible medications and reliable research subjects, the authors wish to expand the field of inquiry. Therefore, understanding of anticancer phytochemicals is stressed for the treatment of breast cancer.

KEYWORD: *Phytochemicals, anticancer, preclinical, clinical, medicinal plants, breast cancer.*

Journal of Cardiovascular Disease Research

ISSN 0975-3583,0976-2833 VOL 14, ISSUE 07, 2023

Characterization, Antioxidant, and Antibacterial Properties of Pyrus pashia Stem Bark-Mediated Green Silver Nanoparticle Synthesis

Virendra Kumar Mourya[1], Pydiraju Kondrapu[2], Pushpendra Kumar Kurre[3], Santosh Kumar[4], Dr Raghvendra[5], Dr. Mukesh Kumar Meena[6], Rajeev Ranjany[7], Sivasubramanian P*

1.Research Scholar, Department Of Applied Science & Humanities, Rajkiya Engineering College Ambedkar Nagar UP

2. Assistant Professor, Aditya Pharmacy College,ADB Road, Surampalem,Kakinada District AP

3. Assistant Professor, Shri Rawatpura Sarkar University Raipur. (C.G.) Nh-43, Dhamtari Road, Raipur C.G

4. Associate Professor, Sanskriti University

5. Principal, Aligarh College Of Pharmacy, Mathura Road Sasni Gate, Aligarh U.P.

6. Assistant Professor, Department Of Pharmaceutical Sciences, Mohanlal Sukhadia University, Udaipur, Rajasthan

7. Assistant Professor,Univ. Department Of Chemistry, DSPM University, Ranchi

Corresponding Author: Sivasubramanian P*,

Email: yuccasiva@gmail.com

Associate Professor, SNS College of Pharmacy and Health Sciences Coimbatore 641035

Abstract: The investigation of using medicinal plants for the production and application of silver nanoparticles (AgNPs) has attracted growing research interest. In this study, AgNPs are synthesized from the stem barks of the Pyrus pashia medicinal plant using a biosynthetic strategy. The reaction conditions were optimized under ambient conditions, including concentration, temperature, time, and pH, and various techniques were employed, such as UV-visible, FTIR, XRD, FESEM, and TEM, to characterize the synthesized AgNPs. The AgNPs produced through this biosynthesis method were found to be spherical and polydispersed, with an average size of 23.92 ± 7.04 nm. The synthesized AgNPs demonstrated an enhanced DPPH free radical scavenging capacity compared to the aqueous extract, with IC50 values of 10.67 ± 0.05 µg/mL and 13.66 ± 0.35 µg/mL, respectively. In the agar well diffusion method, the

EVALUATION OF ANTI-CONVULSANT POTENTIAL OF ALLIUM SATIVUM EXTRACT IN VALIDATED ANIMAL MODELS

Pydiraju Kondrapu[1], Shailaja Nare[2], Ganesh Rangrao Pawar[3*], A. Rekha Devi[4], Mamta Bhatia[5], Nisha Choudhary[6], Talele Dipali[7], Moushumi Baidya[8]

Article History: Received: 11.04.2023 **Revised:** 27.05.2023 **Accepted:** 13.07.2023

Abstract

Allium sativum, also known as ALLIUM SATIVUM, is a basic vegetable that has traditionally been used for cooking, flavoring, and natural remedies. Patented organic sulfur compounds in ALLIUM SATIVUM include diallyl sulfide, allicin (dially lthiosulfate), -glutamylcysteine, S-allylcysteine (alliin), and ajoene. ALLIUM SATIVUM positively affects stimulation, oxidative pressure markers, hypertension, hyperlipidemia, and endothelial capacity in vitro or in animal models. In addition to their use in humans, these bioactive atoms play a significant role in the creation of domesticated animals and fish. The modern rural concept of natural animal culture is dependable with the addition of ALLIUM SATIVUM and its related goods to animal feed. This study collects information on the effects of using ALLIUM SATIVUM and its extracts on certain animal execution limits, including chicken, hares, ruminants, pigs, and fish. This audit may serve as a guide for researchers and businesspeople as they investigate the uses of feeds containing ALLIUM SATIVUM and allicin side effects to enhance animal husbandry and seafood output.

Keywords: Animal production, allium sativum, Nutritional applications, anti-convulsant potential, allium sativum, extract.

[1]Assistant Professor, Aditya pharmacy colleg, ADB road , Surampalem, Kakinada, Andhra Pradesh. 533437

[2]Assistant professor, Bharati Vidyapeeth College of Pharmacy, Near Chitranagari, Kolhapur, Maharshtra- 416013

[3*]Department of Pharmacology, NSPM'S College of Pharmacy, Arni Bypass Road Darwha District Yavatmal, Maharashtra, India. 445202

[4]Associate Professor, SEVEN HILLS College of Pharmacy, Venkataramapuram, Tirupati, Andhra Pradesh. 517526

[5,6]Assistant Professor, Maulana Azad University, Bhujawar, Jodhpur, Rajasthan. 342802

[7]Assistant Professor, Faculty of Pharmacy, Vishwakarma University, Survey No 2,3,4 Laxmi Nagar, Kondhwa, Budruk, Pune. 411048

[8]Assistant Professor, Bharat Pharmaceutical Technology, Amtali, Agartala, Tripura. 799130

[*]Corresponding Author
Ganesh Rangrao Pawar[3*]
[3*]Assistant Professor, NSPM'S College of Pharmacy, Arni Road Darwha Dist Yavatmal, Maharashtra, India. 445202

DOI: 10.31838/ecb/2023.12.s3.672

ADITYA PHARMACY COLLEGE SURAMPALEM 533 437

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437

IN VITRO AND IN VIVO ASSESSMENT OF SEMECARPUS ANACARDIUM SEEDS FOR NOOTROPIC & HALLUCINOGEN ACTIVITY

Mamatha M K[1], Pydiraju Kondrapu[2], Shainda Laceq[3], R. A. M. Jainaf Nachiya[4*], Muzaffar Ahmed Farooqui[5], Bishwanath Mishra[6], Kartikey Pandey[7], Nidhi Nitin Chauhan[8]

Article History: Received: 08.03.2023 **Revised:** 21.05.2023 **Accepted:** 13.07.2023

Abstract

The study's main objective is to assess whether Seme carpus anacardium seeds may enhance wistar rats' memory. Materials and Techniques Utilizing the Morris water test and a raised in addition to labyrinth contraption to gauge a property called move dormancy, the seeds of Seme carpus anacardium were separated utilizing a consecutive dissolvable extraction strategy. As a result, transfer latency was reduced dose dependently when using Seme carpus anacardium seeds extract in comparison to the control group. Conclusion: Its viability against neurodegeneration and backing for its nootropic characteristics were shown by the reduction in move idleness, which was portion subordinate.

Keywords: Seme Carpus, Hallucinogen Activity, Anacardium Seeds, Nootropic.

[1]Associate Professor, Mallige College of Pharmacy Silvepura Bangalore. 560090
[2]Assistant Professor. Aditya pharmacy colleg, ADB road ,Surampalem, Kakinada, Andhra Pradesh. 533437
[3]Assistant Professor, Maharana Pratap college of Pharmaceutical Sciences.
[4]Assistant Professor, B. S. Abdur Rahman Crescent Institute of Science And Technology, Crescent school of pharmacy.
[5]Professor, Auranagabad Pharmacy college Mitmita Aurangabad, Maharashtra. 431002
[6]Assistant Professor, Institute of Pharmacy & Technology, Salipur, Cuttack, Odisha 754202.
[7]Assistant Professor, Krishnarpit institute of pharmacy, Iradatganj, Ghoorpur, Prayagraj, Uttar Pradesh. 212107
[8]Professor & HOD in the Department of Pharmacognosy, Laxminarayandev College of Pharmacy, Bholav, Bharuch, Gujarat. 392001

***Corresponding Author**
R. A. M. Jainaf Nachiya[4*]
[4*]Assistant Professor, B. S. Abdur Rahman Crescent Institute of Science And Technology, Crescent school of pharmacy

DOI: 10.31838/ecb/2023.12.s3.668

ADITYA PHARMACY COLLEGE SURAMPALEM 533 437

Principal
Aditya Pharmacy College
SURAMPALEM-533 437

Nisoldipine, Antihypertensive Drug with Solubility Enhancement: Formulation and Evaluation

Sarita Garg[1], Pydiraju Kondrapu[2], Dr Lalit Mohan Trivedi[3], Ms Preeti[4], Rajeev Ranjan[5], Jitendra M Shah[6], Ashish Kumar Tiwari[7], Muhammed Amanat[8], Pryanka[9]*

[1] *Associate Professor, Vaish Institute of Pharmaceutical Education and Research, Rohtak*
[2] *Assistant Professor, Aditya pharmacy college, Surampalem, ADB road, Kakinada District, AP 533435*
[3] *Assistant Professor, Moradabad Institute of Technology Ramgangavihar II Moradabad UP244001*
[4] *Assistant Professor, Gurugram Global College of Pharmacy, Farruknagar, Gurugram, Haryana,122506*
[5] *Assistant Professor, Univ. Department of Chemistry, DSPM University, Ranchi-834008*
[6] *Assistant Professor, Sandip Institute of Technology and Research Centre, Nashik*
[7] *Assistant Professor, Krishnarpit Institute of Pharmacy, Iradatganj, Ghoorpur, Prayagraj Pin code-212107*
[8] *Assistant Professor, Central University of Punjab, Ghudda, Bathinda- 151401*
[9] Assistant Professor, Rayat Bahara University, Sahauran, Tehsil Kharar, Distt Kharar, Punjab 140103

Corresponding Author:Pryanka,
pryankamatta@gmail.com

Abstract

A nanoemulsion is a thermodynamically or kinetically stable liquid dispersion made up of two immiscible liquid phases, such as an oil phase and a water phase. The use of a Poly-decalactone Polymer offers a potential strategy to improve this limitation because the technological approach for hydrophilic medium polar drugs is less effective. The formulation that had been optimized using the formulation variables was then further optimized using the process variable. Particle size decreased with changes in stirring time and speed. The optimized formulations have a particle size between 583-615 nm; PDI of0.657±1.8, 0.552±1.05, and 0.734±1.51were selected for loading of the drug for final formulations. The particle size and shape of nanoemulsions were not changed after drug encapsulation. the values of NNE1, NNE2, NNE3, and NNE5 formulation were found to be 6.3±0.04, 7.4±0.08, 6.7±0.06, and 7.0±0.09 units only. In all cases, pH showed the smallest changes. The pH value of the optimized nanoemulsion formulation NNE3 was found to be 6.6±0.06. demonstrating its suitability for oral administration. Drug entrapment efficiencies of different formulations i.e. NNE1, NNE2, NNE3, NNE4, and NNE5 were found to be 71.33±1.62%, 82.4±0.24%, 99.95±1.35%, 90.12±0.34%, and 79.03that showed to affect the encapsulation of drug. Stability studies were carried out at 4^{0}C and 25^{0}C.

Keywords: Nisoldipine, Solubility Enhancement, Bioavailability Enhancement, Tween-80

INTRODUCTION

NANOEMULSION

A nanoemulsion is a liquid dispersion comprising two immiscible liquid phases, such as an oil phase and a water phase, The Kelvin effect is responsible for Ostwald ripening.

Int. J. Pharm. Investigation, 2024; 14(4):1085-1095.
https://www.ijponline.org

Review Article

Recent Advancement in Exosome-Inspired Lipid Nanovesicles for Cell-Specific Drug Delivery

Siva Prasad Sunkara[1], Nihar Ranjan Kar[2], Shaik Kareemulla[3], Koushik Narayan Sarma[4], Komal Umare Thool[5], Manoj Kumar Katual[6], Pydiraju Kondrapu[7,*]

[1]Department of Pharmacy, Chebrolu Hanumaiah Institute of Pharmaceutical Sciences, Chandramouli Puram, Chowdawaram, Guntur, Andhra Pradesh, INDIA.
[2]Department of Pharmacy, Centurion University of Technology and Management, Gopalpur, Balasore, Odisha, INDIA.
[3]Department of Pharmacy Practice, M. M. College of Pharmacy (Maharishi Markandeshwar Deemed University), Mullana-Ambala, Haryana, INDIA.
[4]Department of Pharmacy, Assam Down Town University, Sankar Madhab Path, Gandhi Nagar Panikhaiti, Guwahati, Assam, INDIA.
[5]Department of Electronics and Communication Engineering, Shree Ramdevbaba College of Engineering and Management Nagpur, Maharashtra, INDIA.
[6]Department of Pharmaceutics, University College of Pharmacy, Guru Kashi University, Sardulgarh Road, Talwandi Sabo, Bhatinda, Punjab, INDIA.
[7]Department of Pharmacy, Aditya Pharmacy College, ADB Road, Surampalem, Kakinada, Andhra Pradesh, INDIA.

Correspondence:
Dr. Pydiraju Kondrapu
Department of Pharmacy, Aditya Pharmacy College, ADB Road, Surampalem, Kakinada-533437, Andhra Pradesh, INDIA.
Email: pydiraju.kondrapu21@gmail.com

Received: 02-02-2024;
Revised: 08-03-2024;
Accepted: 02-05-2024.

ABSTRACT

Exosomes are small nanovesicles that are produced through the fusion of multiple veins and plasma membranes, then escaping into adjacent body fluids. Considerable attention has been paid to them due to their potential as delivery vehicles for drugs. Exosomes play a key role in many physiological processes that occur both in healthy and ill states. The production of exosomes depends on the state of the disease, but the disease itself often serves the opposite function by promoting more cell damage and stress. Traditional drug delivery methods often face limitations in terms of specificity, targeted delivery and drug release kinetics. Exosomes have emerged as promising candidates for drug delivery due to their natural ability to selectively deliver cargoes to recipient cells. Exosomes are taken up through various mechanisms, including endocytosis and fusion with target cells. They can encapsulate poorly soluble drugs, enhancing their bioavailability and improving their therapeutic efficacy. Exosomes inspired Lipid Nanovesicles (Exo-LNVs) have shown promising results as drug delivery vehicles. Exosomes have considerable potential as sophisticated vehicle for the delivery of targeted drugs and genes due to their unique characteristics, including inherent stability, minimal immunity and exceptional ability to penetrate tissues and cells. Therapeutic interventions have the capacity to increase effectiveness, reduce side effects and increase patient compliance. Exosomes have the ability to transport various therapeutic by encapsulating different substrates such as nucleic acids, proteins and small molecules. Recent advancements in exosome-inspired lipid nanovesicles have opened up new possibilities for cell-specific drug delivery. These nanovesicles mimic the composition and structure of exosomes, which are naturally occurring extracellular vesicles released by cells. By incorporating therapeutic agents into the lipid nanovesicles, they can effectively target and deliver drugs to specific cells of interest. This review article aims to summarize the current literature on Exo-LNVs and discuss their potential as drug delivery vehicles. A systematic search was conducted to identify relevant studies and relevant data were extracted and analyzed. The review covers various aspects of Exo-LNVs, including their composition, preparation methods and applications in various disease conditions.

Keywords: Exosome, Exo-LNVs, Surface modification, Drug delivery system, Extracellular vesicles, Therapeutic cargo.

INTRODUCTION

The function of drug delivery systems in pharmaceutical science is crucial. Treatment agents are delivered to target cells or tissues through these methods, minimizing systemic toxicity and maximizing effectiveness by preventing non-specific distribution.[1] Over the past decades, remarkable progress and innovations have been made in the field of Drug Delivery Systems (DDS) using nanocarriers and vehicles. Traditional approaches to the delivery of drugs, including oral administration, lead to the dispersion of drugs in the gastrointestinal tract, which results in reduced bioavailability and inconsistent absorption.[2] To overcome these limitations, researchers have developed various delivery systems, including nanoparticles, liposomes, hydrogels and nanoparticles. Lipid nanovesicles, also known as

DOI: 10.5530/ijpi.14.4.119

A Brief Review Of Pathophysiology And Management Of Different Types Of Arthritis

Shadab Ali[1]*, Sayad Ahad Ali[1], Pydiraju Kondrapu[2], Nidhi Tripathi[3], Pramod Bhaskar Kumar[4], Dr P. Dharani Prasad[5], Manisha Madhukar Tonape[6], Mr. Pratik P. Terse[7], Muhammed Ameen MP[8], Sunil Kumar[9], Abhisek Saha[10]

[1,2] Assistant Professor, Department of Pharmacy, IIMT College of Medical Sciences, IIMT University, 'O' Pocket, Ganganagar, Meerut, U.P., 250001, India

[2] Assistant Professor, Aditya Pharmacy College

[3] Assistant Professor, Anuragh Memorial College, Katari Hill Road, Gaya 823001

[4] Associate Professor, Shree Devi College of Pharmacy, Airport Road, Kenjar, Mangalore, DK Karnataka 574142

[5] Professor, MB University erstwhile (Sree Vidyaniketan College of Pharmacy) Tirupati 517102

[6] Head of the Department and Associate Professor, Physiotherapy Department, School of Allied Health Science, The Assam Kaziranga University, Koraikowa, Jorhat, Assam 785006

[7] Research Scholar, Madhav University Rajasthan, Pin: 307026

[8] Assistant Professor, Department of Pharmacology, Yenepoya Pharmacy College & Research Centre, Yenepoya (Deemed to be University), Mangaluru-575018

[9] Associate professor, Faculty of pharmacy, P.K.University, Village - Thanra, Teshsil- Karera, Dist: Shivpuri, M.P.- 473665

[10] Associate Professor in Chemistry, Tufanganj College, West Bengal, Pin code 736160

Corresponding Author

Shadab Ali,

Assistant Professor, Department of Pharmacy, IIMT College of Medical Sciences, IIMT University, 'O' Pocket, Ganganagar, Meerut, U.P., 250001, India

shadabali12341234@gmail.com, ahadali75405@gmail.com

Article History: Received: 10/5/2023 Revised: 12/6/2023 Accepted: 14/7/2023

Abstract

Arthritis is derived from the Greek term "disease of the joints." It is defined as an acute or chronic joint inflammation that often co-exists with pain and structural damage. Hereditary and acquired autoinflammatory illnesses have a direct correlation with several inflammasomes. Numerous autoimmune illnesses, including systemic lupus erythematosus (SLE), type 1 and type 2 diabetes, neurological disorders, and cancer, have been linked to excessive inflammasome activation. A frequent kind of systemic autoimmune illness that mostly affects synovial joints is rheumatoid arthritis (RA). Osteoarthritis (OA) is the most common form of arthritis that simultaneously affects the lives of elderly people as well as young individuals suffering post-traumatic injuries. Any articular joint in the body may be affected by this chronic inflammatory

PHYTOCHEMICAL EVALUATION, IN VITRO ANTIOXIDANT ACTIVITY AND IN-VIVO ANTIDIABETIC ACTIVITY OF ACACIA NILOTICA

Nikita A Sadalage[1], Moushumi Baidya[2], Pydiraju Kondrapu[3*], Nitin B Ghiware[4], Archana Pramod Shaha[5], Shiyal Mayur Kalubhai[6], Shailaja Nare[7], Shweta Manjeet Rajput[8]

Article History: Received: 26.04.2023 **Revised:** 21.06.2023 **Accepted:** 19.07.2023

Abstract

In the current study, the total phenolic and flavonoid content, antioxidant activities, and antidiabetic activity of several leaf extracts from Acacia nilotica were assessed. Analysis of the extracts' phytochemical composition was also done. DPPH free radical scavenging experiment was used to calculate antioxidant potential. In comparison to pods and bark, the leaves were shown to have a higher total phenolic content, higher protein content, and higher antioxidant activity. The authors have tried to put all these classes of plants at a common platform so that the data and information of this review could be utilized in drawing strategies for use of medicinal plants in a way that can be extended for future scientific investigation in different aspects. The fact confirmed by reports from the World Health Organization (WHO) shows that India has the largest number of diabetic subjects in the world. Hyperglycemia can be handed initially with oral synthetic agent and insulin therapy. But these synthetic agents produce some serious side effects and are relatively expensive for developing countries. The clinical signs, severity, and treatment of oral antidiabetic drug toxicity vary greatly. Numerous plants have been touted as having therapeutic benefits for the treatment of diabetes mellitus in the natural medical system. Due to availability and affordability, a substantial rural population relies on medicinal herbs to cure their diabetes. Besides hyperglycemia, several other factors including dislipidemia or hyperlipidemia are involved in the development of micro and macrovascular complications of diabetes that are the major causes of morbidity and death. Leaves of ***Acacia nilotica*** used as anti-diabetic, for feeding sheep and goats in the Hissar district in India. In Kenya, the fleshy pods are readily eaten by goats, sheep and cattle, but some tribes believe they cause bloat. As a result, A. nilotica leaf extracts are a potential source of antioxidant and anti-diabetic chemicals.

Keywords: Acacia Nilotica, Hyperglycemia, Diabetes Mellitus, DPPH, Hyperlipidemia, Antidiabetic, Antioxidant.

[1]Assistant Professor, KLE College of Pharmacy (KLE Academy of Higher Education and Research), Belagavi, Karnataka. 590010
[2]Assistant Professor, Bharat Pharmaceutical Technology, Amtali, Agartala, Tripura.799130
[3]Assistant Professor, Aditya pharmacy college ,ADB road ,Surampalem, Kakinada, Andhra Pradesh. 533437
[4]Professor & Head, Department of Pharmacology Nanded Pharmacy College, Shyam Nagar, Nanded, Maharashtra. 431605
[5]Assistant Professor, Vishwakarma University School of Pharmacy, Pune, Maharashtra.
[6]Assistant Professor, Atmiya University, Yogidham Gurukul, Kalawad Road, Rajkot, Gujarat. 360005
[7,8]Assistant Professor, Bharati Vidyapeeth College of Pharmacy, Near Chitranagari, Kolhapur, Maharshtra-416013

***Corresponding Author**
Pydiraju Kondrapu[3*]
[3*]Assistant Professor, Aditya pharmacy college ,ADB road ,Surampalem, Kakinada, Andhra Pradesh. 533437

DOI: 10.31838/ecb/2023.12.6.211

Eur. Chem. Bull. 2023, 12 (6), 2317 – 2330

Aerva lanata: Roots Extract for the analysis of phytochemicals

Dr. M. Shanmugavadivu[1], Dr. Priyanka Bankoti[2], Dr. Biren N. Shah[3], Tushar Arun Rode[4], Dr Balan Paramasivam[5], Abhisek Saha[6], Ashish Kumar Tiwari[7], Dr. Nihar Ranjan Kar[8], Pydiraju Kondrapu[9]*

[1]*Associate Professor, Dr. N. G. P. Arts and Science College, Coimbatore-641048, Tamil Nadu, India*

[2]*Professor, Shri guru ram rai university Dehradun*

3*Professor, Shree Naranjibhai Lalbhai Patel College of Pharmacy, Bardoli Mota Road, Bardoli, Gujara-394345*

[4]*Assistant Professor, P. W. College of Pharmacy, Moha Phata, Dhamangaon Road, Yavatmal. 445001.*

[5]*Professor, The Erode College of Pharmacy, Erode -638112, Tamil Nadu.*

[6]*Associate Professor in Chemistry, Tufanganj College, West Bengal-736160, India*

[7]*Assistant Professor, Krishnarpit Institute of Pharmacy, Iradatganj, Ghoorpur, Prayagraj, Uttar Pradesh, Pin-212107*

[8]*Assistant Professor, Centurion University of Technology and Management, Gopalpur, Balasore, Odisha, India*

[9]*Assistant Professor, Aditya Pharmacy College, Surampalem, India*

***Corresponding Author:Pydiraju Kondrapu,**
Assistant Professor, Aditya Pharmacy College, Surampalem, India
Email: pydikondrapu604@gmail.com

Article History: Received:10/7/23 Revised: 18/7/23 Accepted: 25/7/23

Abstract:

Numerous common illnesses may be prevented or treated with the help of phytochemicals. There is little doubt that identifying and isolating these phytochemicals would benefit human civilisation. Consequently, this research work explores phytochemicals and performs qualitative and quantitative evaluation of the same. The roots of *Aerva lanata* were harvested and extracted using the maceration process using solvents including chloroform, ethyl acetate, methanol, and water. Additional qualitative and quantitative research was conducted on the topic. According to the findings, water, methanol, ethyl acetate, and chloroform had respective concentrations of 2.32%, 2.90%, 8.14%, and 3.44%. The sole substance detected in the chloroform extract was tannin. The phenol and tannin tests for ethyl acetate were positive. The phytoconstituents flavonoid, phenol, and tannin were considerably more abundant in the methanolic extract. The aqueous extract ultimately tested positive for tannin & flavonoid. The *Aerva lanata* extract contains additional classes of phenol and flavonoids in addition to the standard used for comparison, according to the results of TLC for phenol and flavonoid analysis. The methanolic extract of *Aerva lanata* is estimated to have a total phenolic content of 1.380 mg/100 mg, whilst the ethyl acetate and aqueous extracts had phenol contents of 0.866 mg/100 mg and 0.613 mg/100 mg, respectively. The methanolic extract's total flavonoid content, which was found to be 1.280 mg/100 mg, was evaluated. *Aerva lanata* root has a large

Endometriosis: A brief review of Pharmacological and Non-Pharmacological Treatment

Sayad Ahad Ali[1]*, Shadab Ali[2], Sameer Rastogi[3], Jhakeshwar Prasad[4], Pydiraju Kondrapu[5], Dr. Bijander Kumar[6], Dr. Aniketa Sharma[7], Kartikey Pandey[8], Dr. Naveen Kumar Choudhary[9]

[1,2] Department of Pharmacy, IIMT College of Medical Sciences, IIMT University, 'O' Pocket, Ganganagar, Meerut 250001

[3] Principal & Dean, School of Pharmacy, Noida International University, Plot No.1, Sector 17 A, Yamuna Expressway, Greater Noida - 203201, Distt. G.B. Nagar, U.P., India

[4] Assistant Professor, Shri Shankaracharya College of Pharmaceutical Sciences, Junwani - 490020, Bhilai, Chhattisgarh, India

[5] Assistant Professor, Aditya Pharmacy College, Surampalem, India

[6] Professor, Mahaveer College of Pharmacy, Meerut

[7] Assistant professor Department of medicine, Dr.YSP GOVT.MEDICAL COLLEGE NAHAN District sirmour H.P Pin 173001

[8] Assistant Professer, Krishanarpit Institute of Pharmacy, Iradtganj Prayagraj

[9] Professor, B R Nahata College of Pharmacy, Mandsaur University, Mandsaur 458001

Corresponding author:Sayad Ahad Ali*

ahadali75405@gmail.com, shadabali12341234@gmail.com

Article History: Received:10/7/23 **Revised: 18/7/23** **Accepted: 25/7/23**

Abstract

Endometriosis is regarded as a spectrum disease with a wide range of subtypes and clinical manifestations. Endometriosis must be found to be present outside of (ectopic) the uterus in order to be defined histologically. These ectopic lesions are frequently found on the peritoneum and pelvic organs. They may occasionally exist in the bladder, kidneys, lungs, and even the brain, among other body organs. Regarding behavioral characteristics, research has been done on the connection between dietary preferences, alcohol and caffeine consumption, smoking, and physical activity in relation to involvement in developing endometriosis. Normal responses to progesterone in the uterine endometrium include suppression of estrogen-dependent epithelial cell proliferation, maturation of the glands' secretory systems, and differentiation of stromal cells into specialized decidual cells. Additionally, progesterone briefly produces the receptive phenotype necessary for embryo implantation in endometrial epithelial cells. Pain is one of its predominant clinical features. Women with endometriosis experience a variety of pain symptoms, most commonly dysmenorrhea, noncyclical pelvic pain, dyspareunia, and dyschezia. The experience of pain, no matter what the underlying disease, involves several different mechanisms and interactions between the periphery and the central nervous system (CNS).

EVALUATION OF ANTIOXIDANT, ANTIDIABETIC AND ANTIHYPERLIPIDEMIC ACTIVITY OF SYZYGIUM CUMINI SEEDS IN DIABETIC ZEBRAFISH MODEL

S. Prema[1], Sarita Sharma[2], Pydiraju Kondrapu[3*], Yogesh Manikrao Kumre[4], Meman Rahil Salim[5], Prabhjot Kaur Khatkar[6], Rajeev Ranjan[7], Mangesh Manikrao Kumare[8]

Article History: Received: 27.05.2023 **Revised:** 10.06.2023 **Accepted:** 31.07.2023

Abstract

High blood glucose levels are a prominent feature of the severe chronic degenerative disease known as diabetes mellitus (DM). It is connected to a complete or partial lack of insulin synthesis and/or action. Coronary illness, retinopathy, renal sickness, and neuropathy are a couple of the issues connected to DM; subsequently, new all-regular therapies are being tried to deal with the condition. In this review, we survey the anti-diabetic activity of Spondias purpurea seed methanol remove (CSM) both in vitro and in a zebra fish model of diabetes that has been produced by glucose. This study's goal was to decide the effect of a methanol concentrate of Syzygium cumini (L.) Skeels. Seed on risky microorganisms and diabetes welcomed on by a solitary intraperitoneal infusion of streptozotocin in rodents. S. cumin, a plant used to treat type 2diabetes I frequently used seeds in powered form. Pathogenic bacterial resistance was examined in S. cumin seed methanol extract. When tested against Bacillus subtilis, E. coli, Staphylococcus aureus, and Klebsiella pneumonia, the anti-bacterial activity performed well. Analysis using TLC and HPLC demonstrates the presence of 11 different chemicals. Rat experiments demonstrated that seeds have positive effects on diabetes mellitus.

Keyword: Evaluation of Antioxidants, Antidiabetic, Antihyperlipidemic Activity, Syzygium Cumini Seeds, and Diabetic Zebrafish Model.

[1]Crescent School of Pharmacy, BS Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai. 600048

[2]MM College of Pharmacy, Maharishi Markendeshwer (Deemed to be University), Mullana, Ambala, Haryana. 133207

[3*]Aditya Pharmacy College, ADB Road, Surampalem, Kakinada, Andhra Pradesh. 533437

[4]Shri Ayurveda College & Pakwsa Samanvay Hospital, Hanuman Nagar, Nagpur, Maharashtra. 440024

[5]Ismail Mehta College of Pharmacy, Beed Road Ambad, Jalna, Maharashtra. 431204

[6]Department of Medical Lab Sciences, Guru Nanak Paramedical College, Dhahan Kalaran, Shaheed Bhagat Singh Nagar, Punjab.144505

[7]Univ. Department of Chemistry, DSPM University, Morhabadi, Ranchi, Jharkhand. 834008

[8]Smt. Kusumtai Wankhede Institute of Pharmacy, Dhantoli, Katol, Nagpur, Maharashtra.441302

[*]Corresponding Author
Pydiraju Kondrapu[3*]
[3*]Assistant Professor, Aditya pharmacy college, ADB road, Surampalem, Kakinada, Andhra Pradesh. 533437

DOI: 10.31838/ecb/2023.12.6.252

Remittances Review
June, 2023
Volume: 8, No: 4, pp. 929-937
ISSN: 2059-6588 (Print) | ISSN 2059-6596 (Online)
remittancesreview.com

Received: 11 November 2022 Accepted: 28 March, 2023
DOI: https://doi.org/10.33182/rr.v8i4.65

Formulation Development and Evaluation of Mucoadhesive Patch for Diabetes Using Plant Based Polysaccharides

Anasuya. Patil[1], Nabamita Basu[2], Senthil Prabhu Rajendran[3*], G. Dharmamoorthy[4], Pavankumar Krosuri[5], Pydiraju Kondrapu[6], Arjun Patidar[7], Ashish Suttee[8]

Abstract

Using plant-based polysaccharides, this study created a mucoadhesive patch for diabetes with the goal of delivering regulated medication release and improved therapeutic efficacy through sustained contact with the buccal mucosa. The patches' physicochemical characteristics, drug release kinetics, and mucoadhesive strength were examined after they had been made using the solvent casting procedure. The created patch had exceptional mechanical, flexible, and physical qualities, as well as prolonged drug release and minimized burst release. Through in vitro cytotoxicity tests, the patch's biocompatibility was verified, demonstrating its suitability for buccal administration. To confirm the effectiveness and safety of this unique medication delivery method, additional in vivo research and clinical trials are required. If successful, these studies could pave the way for more individualized and efficient diabetic treatment options.

Keywords: *-Polysaccharides, Mucoadhesive Patch, Diabetes, Formulation, Evaluation, Development.*

1. Introduction

Peptide and protein-based medicines are right now the focal point of medication advancement, making up close to half of the drug business' pipeline meds. This is on the grounds that these macromolecules can join just to their expected targets, diminishing the probability of undesirable aftereffects. Peptide/protein-based meds, then again, require parenteral organization due to their flimsiness in the GIT and restricted penetrability across natural films during oral conveyance. Resistance with infusions presents a serious hindrance for habitually regulated meds like insulin, where inadequate control of diabetes can prompt difficult issues.

To proficiently control helpful proteins/peptides, there have been a few endeavors to make inventive oral conveyance frameworks. The utilization of nanoparticles for insulin conveyance has gotten a ton of consideration as of late. For the oral organization of helpful proteins like salmon calcitonin, exenatide, and insulin, our gathering has been dealing with the advancement of mucoadhesive digestive gadgets. To arrive at the small digestive system, mucoadhesive gadgets are encased in intestinal covered containers created from a mix of mucoadhesive polymers. At the point when ingested, the containers fall to pieces in the stomach, delivering the gadgets, which then append to the digestive mucosa, extend, and step by step discharge their pharmacological burden as the gadget lattice breaks down. The gadgets remember a water-impermeable covering for all sides with the exception of one, which takes into consideration controlled, one-way prescription delivery.

As well as safeguarding the medicine from the stomach's acidic climate, these gadgets block the proteolytic compounds in the GIT from arriving at the medication load, ending the enzymatic obliteration of remedial proteins. The gadgets

[1] Department of Pharmaceutics, KLE College of Pharmacy, II Block Rajajinagar, Bengaluru, Karnataka. 560010
[2] Department of Pharmaceutics, Gokaraju Rangaraju College of Pharmacy, Bachupally, Hyderabad, India. 500090
[3] Department of Pharmaceutics, College of Pharmacy, Madurai, 625020, Affiliated to the Tamilnadu Dr. MGR Medical University, Chennai, Tamilnadu. **Corresponding Author Senthil Prabhu Rajendran**
[4] Department of Pharmaceutical analysis, MB school of Pharmaceutical sciences, Mohan Babu University, Tirupati.
[5] Department of Pharmaceutics, Sandhyaraa College of pharmacy, NH40, Nerawada, Nandyal, Andhrapradesh, India
[6] Aditya Pharmacy College, ADB Road, Surampalem, Kakinada, Andhra Pradesh. 533437
[7] Sri Aurobindo Institute of Pharmacy, Indore, Madhya Pradesh. 456006
[8] School of Pharmaceutical Sciences, Lovely Professional University, Punjab, India-144411