LOKMANYA TILAK JANKALYAN SHIKSHAN SANSTHA'S
PRIYADARSHINI J. L. COLLEGE OF PHARMACY
(Formerly known as J. L. Chaturvedi College of Pharmacy)
Electronics Zone Building, MIDC, Hingna Road, Nagpur-440016 (M.S.) India
Tel. No.: +91-7104 - 299510
E-mail: principal@pjlcp.edu.in, ilccpngp@gmail.com • Website: www. pjlcp.edu.in
Accredited with Grade B++ by NAAC
Institute Code: DTE 4265 & RTMNU 265

Key Indicator 3.3- Research Publication

***METRIC NO.*:-3.3.1.**
Number of papers published per teacher in the Journals notified on UGC website during the last five years

CALENDER YEAR 2020

Journals Papers

Priyadarshini J. l. College of Pharmacy, Nagpur, Maharashtra, India
Certified Document from page No.1 to42

DINESH RAMKRUSHNAR AO CHAPLE
Digitally signed by DINESH RAMKRUSHNAR AO CHAPLE
Date: 2023.07.24 15:17:37 +05'30'

Sr. NO.	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication
1.	Novel Corona Virus COVID-19: An Overview.	Dr. Mrs. S. A. Deshpande	Pharmacology	Acta Scientific Microbiology	**2020**
2.	Novel Corona Virus COVID-19: An Overview.	Mr. P. N. Amale	Pharmacology	Acta Scientific Microbiology	**2020**
3.	Resveratrol: A Pleiotropic Phytoconstituent	Mr. P. N. Amale	Pharmacology	International Journal of Research in Pharmaceutical Sciences (IJRPS)	**2020**
4.	Resveratrol: A Pleiotropic Phytoconstituent	Dr. Mrs. S. A. Deshpande	Pharmacology	International Journal of Research in Pharmaceutical Sciences (IJRPS)	**2020**
5.	Evolutionary Role of Epigenetics in Ischemic Stroke: A Review	Mr. P. N. Amale	Pharmacology	International Journal of Research in Pharmaceutical Sciences	**2020**
6.	Evolutionary Role of Epigenetics in Ischemic Stroke: A Review	Dr. Mrs. S. A. Deshpande	Pharmacology	International Journal of Research in Pharmaceutical Sciences	**2020**
7.	Comparison of Efficacy of Topical Curcumin Gel with Triamcinolone-hyaluronidase Gel Individually and in Combination in the Treatment of Oral Submucous Fibrosis	Dr. Mrs S. S Bakhle	Pharmaceutics	The Journal of Contemporary Dental Practice	**2020**
8.	Screening of super disintegrants by formulating and evaluating fast dissolving tablets of ondansetron hydrochloride	Dr. Mrs. K. P. Upadhye	Pharmaceutics	World Journal of Pharmaceutical Sciences	**2020**
9.	Hemorrhoids: a review on herbal treatments and models for pharmacological evaluation,	Dr. Mrs. S. A. Deshpande	Pharmacology	International Journal of Pharmaceutical Sciences Review and Research	**2020**
10.	Hemorrhoids: a review on herbal treatments and models for pharmacological evaluation,	Mr. P. N. Amale	Pharmacology	International Journal of Pharmaceutical Sciences Review and Research	**2020**

11.	Synthesis, physicochemical characterization and analgesic evaluation of some new thieno [2,3-d] Pyrimidin 4(3H) one derivativ	Dinesh P Kawade	Pharmaceutical Chemistry	Pharmaceutical Chemistry	2020
12.	Synthesis, physicochemical characterization and analgesic evaluation of some new thieno [2,3-d] Pyrimidin 4(3H) one derivativ	Dinesh R Chaple	Pharmaceutical Chemistry	Pharmaceutical Chemistry	2020
13.	Preparation and Evaluations of Diatrizoate Sodium Liquid Oral Formulation	Dinesh P. Kawade	Pharmaceutical Chemistry	European Journal of Biomedical and Pharmaceutical Sciences	2020
14.	SARS coronavirus: A review of threat in global world	Dinesh Kawade	Pharmaceutical Chemistry	International Journal of	2020
15.	Formulation and Evaluation of Vitamin E Enriched Cold Cream with Almond oil as an Internal Phase	Alpana Asnani	Pharmaceutics	International Journal Pharmaceutical Sciences Review Research	2020
16.	Formulation and Evaluation of Vitamin E Enriched Cold Cream with Almond oil as an Internal Phase	Gouri Dixit	Pharmaceutics	International Journal Pharmaceutical Sciences Review Research	2020
17.	Dissolution -A Quality Parameter for Testing of Pharmaceutical Dosage Form	Dr. Mrs. Gouri R. Dixit	Pharmaceutics	International Journal Pharmaceutical Sciences Review Research	2020
18.	A Review on Herbal Drugs used in Cognitive Impairment	Dr. Mrs. Gouri R. Dixit	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical Sciences	2020
19.	A comprehensive review on current strategies and developments in treatment of skeletal muscle atrophy	Dr. D. R. Chaple	Pharmachemistry	IP International Journal of Comprehensive and Advanced Pharmacology	2020

20.	A comprehensive review on current strategies and developments in treatment of skeletal muscle atrophy	Mrs. S. V. Mangrulkar	Pharmacology	IP International Journal of Comprehensive and Advanced Pharmacology	2020
21.	Recent Insights into Some Emerging Natural Resources with Remarkable Hepatoprotective Potentials	Mr. Pratyush Kumar	Pharmaceutical Chemistry	International Journal of Pharmaceutical Science and Research	2020
22.	In silico screening and molecular docking of bioactive agents towards human coronavirus	Mr. Pratyush Kumar	Pharmaceutical Chemistry	Journal of Pharmaceutical Research and Therapeutics	2020
23.	In silico screening and molecular docking of bioactive agents towards human coronavirus	Dr. Mrs. A. J. Asnani	Pharmaceutical Chemistry	Journal of Pharmaceutical Research and Therapeutics	2020
24.	In silico screening and molecular docking of bioactive agents towards human coronavirus	Dr. D.R. Chaple	Pharmaceutical Chemistry	Journal of Pharmaceutical Research and Therapeutics	2020
25.	Current Updates on Recurrent Aphthous Stomatitis: Etiology, Pathogenesis And Managements	Dr. Mrs. K. P. Upadhye	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical sciences	2020
26.	Current Updates on Recurrent Aphthous Stomatitis: Etiology, Pathogenesis And Managements	Mr. Y. N. Gholse	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical sciences	2020
27.	Current Updates on Recurrent Aphthous Stomatitis: Etiology, Pathogenesis And Managements	Dr. D.R. Chaple	Pharmaceutical Chemistry	World Journal of Pharmacy and Pharmaceutical sciences	2020
28.	Microsponge as a Novel Drug Delivery System: A Futuristic Approach	Dr. Mrs. K. P. Upadhye	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical sciences	2020

29.	Microsponge as a Novel Drug Delivery System: A Futuristic Approach	Mr. A. R. Thakre	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical sciences	2020
30.	Fast Dissolving Sublingual Film of Rizatriptan Benzoate for Management of Migraine	Dr. Mrs. K. P. Upadhye	Pharmaceutics	International Journal of Pharmacy and Pharmaceutical Research	2020
31.	Recent Updates on Anticancer activities of Pomegranate	Dr. Mrs. K. P. Upadhye	Pharmaceutics	International Journal of Pharma And Chemical Research	2020
32.	Comparison of Evaluation Parameters of Different Brands of Marketed Toothpaste	Dr. Mrs. K. P. Upadhye	Pharmaceutics	Journal of Medical Pharmaceutical And Allied Sciences	2020
33.	Comparison of Evaluation Parameters of Different Brands of Marketed Toothpaste	Mr. Y. N. Gholse	Pharmaceutics	Journal of Medical Pharmaceutical And Allied Sciences	2020
34.	Comparison of Evaluation Parameters of Different Brands of Marketed Toothpaste	Dr. D. P. Kawade	Pharmaceutical Chemistry	Journal of Medical Pharmaceutical And Allied Sciences	2020
35.	Comparison of Evaluation Parameters of Different Brands of Marketed Toothpaste	Dr. D.R. Chaple	Pharmaceutical Chemistry	Journal of Medical Pharmaceutical And Allied Sciences	2020
36.	Hand Sanitizers: An Essential Commodity in A Busy Life	Dr. Mrs. K. P. Upadhye	Pharmaceutics	International Journal of Pharmaceutical Sciences Review and Research	2020
37.	A Review on Ion Exchange Resins as Drug Delivery System	Dr. Mrs. S. S. Bakhle	Pharmaceutics	International Journal of Pharmaceutical Sciences Review and Research	2020

38.	A Review on Ion Exchange Resins as Drug Delivery System	Dr. Mrs. G. R. Dixit	Pharmaceutics	International Journal of Pharmaceutical Sciences Review and Research	2020
39.	A Review on Ion Exchange Resins as Drug Delivery System	Dr. Mrs. K. P. Upadhye	Pharmaceutics	International Journal of Pharmaceutical Sciences Review and Research	2020
40.	Role of Tocopherol in the Prevention and Treatment of Various Disorders	Dr. V. D. Gulkari	Pharmacognosy	World Journal of Pharmaceutical Research	2020
41.	Pharmacognostic studies of leaves, roots, stem, and fruits of Uraria picta,	Dr. V. D. Gulkari	Pharmacognosy	World Journal of Pharmaceutical Sciences	2020
42.	Carbohydrate Polymers: Beyond the title	Dr. V. D. Gulkari	Pharmacognosy	World Journal of Pharmacy and Pharmaceutical Sciences	2020
43.	A Comprehensive Updated Review on Gingival Crevicular Fluid: Characteristics, Collection and Estimation,	Mr. Y. N. Gholse	Pharmaceutics	Journal of Medical Pharmaceutical and Allied Sciences	2020
44.	A Comprehensive Updated Review on Gingival Crevicular Fluid: Characteristics, Collection and Estimation,	Mr. A. R. Thakre	Pharmaceutics	Journal of Medical Pharmaceutical and Allied Sciences	2020
45.	A Comprehensive Updated Review on Gingival Crevicular Fluid: Characteristics, Collection and Estimation,	Dr. R. H. Kasliwal	Pharmaceutics	Journal of Medical Pharmaceutical and Allied Sciences	2020
46.	Current Updates on Natural Super disintegrates in the Development of Fast Dissolving Tablets,	Dr. D. R. Chaple	Pharmaceutical Chemistry	Journal of Medical Pharmaceutical and Allied Sciences	2020

47.	Current Updates on Natural Super disintegrates in the Development of Fast Dissolving Tablets,	Mr. Y. N. Gholse	Pharmaceutics	Journal of Medical Pharmaceutical and Allied Sciences	2020
48.	Current Updates on Natural Super disintegrates in the Development of Fast Dissolving Tablets,	Dr. R. H. Kasliwal	Pharmaceutics	Journal of Medical Pharmaceutical and Allied Sciences	2020
49.	A Review on Oral Controlled Drug Delivery System: A Modern Formulation Approach	Dr. R. H. Kasliwal	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical Sciences	2020
50.	A Review on Oral Controlled Drug Delivery System: A Modern Formulation Approach	Dr. D. R. Chaple	Pharmaceutical Chemistry	World Journal of Pharmacy and Pharmaceutical Sciences	2020
51.	A Review on Oral Controlled Drug Delivery System: A Modern Formulation Approach	Mr. Y. N. Gholse,	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical Sciences	2020
52.	Recent Trends of Polymer Usage in the Formulation of Orodispersible Tablets,	Dr. D.R. Chaple	Pharmaceutical Chemistry	World Journal of Pharmacy and Pharmaceutical Sciences	2020
53.	Recent Trends of Polymer Usage in the Formulation of Orodispersible Tablets,	Mr. Y. N. Gholse,	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical Sciences	2020
54.	Recent Trends of Polymer Usage in the Formulation of Orodispersible Tablets,	Dr. R. H. Kasliwal	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical Sciences	2020
55.	Current Updates on Biochemical Identification Methods of Gingival Crevicular Fluid Microflora of Severe Peridontitis Patient	Dr. R. H. Kasliwal	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical Sciences	2020

56.	Current Updates on Biochemical Identification Methods of Gingival Crevicular Fluid Microflora of Severe Peridontitis Patient	Dr. D. R. Chaple	Pharmaceutical Chemistry	World Journal of Pharmacy and Pharmaceutical Sciences,	2020
57.	Current Updates on Biochemical Identification Methods of Gingival Crevicular Fluid Microflora of Severe Peridontitis Patient	Mr. Y. N. Gholse	Pharmaceutics	World Journal of Pharmacy and Pharmaceutical Sciences	2020
58.	COVID-19: Recent Updates on its Mechanism and Treatment,	Mr. Y. N. Gholse	Pharmaceutics	International Journal of Pharmaceutical Sciences Review and Research	2020
59.	COVID-19: Recent Updates on its Mechanism and Treatment,	Dr. R. H. Kasliwal	Pharmaceutics	International Journal of Pharmaceutical Sciences Review and Research	2020
60.	COVID-19: Recent Updates on its Mechanism and Treatment,	Dr. D. R. Chaple	Pharmaceutical Chemistry	International Journal of Pharmaceutical Sciences Review and Research	2020
61.	In silico studies of pyrano [2, 3-c] pyrazoles derivatives as cyclooxygenase-2 inhibitiors,	Dr. D. R. Chaple	Pharmaceutical Chemistry	GSC Biological and Pharmaceutical Sciences	2020
62.	In silico studies of pyrano [2, 3-c] pyrazoles derivatives as cyclooxygenase-2 inhibitiors,	Dr. Mrs. A. J. Asnani	Pharmaceutical Chemistry	GSC Biological and Pharmaceutical Sciences	2020
63.	In silico studies of pyrano [2, 3-c] pyrazoles derivatives as cyclooxygenase-2 inhibitiors,	Mr. Pratyush Kumar	Pharmaceutical Chemistry	GSC Biological and Pharmaceutical Sciences	2020
64.	In silico Screening and Molecular Docking of Bioactive Agents towards Human Coronavirus,	Dr. D. R. Chaple	Pharmaceutical Chemistry	Journal of Pharmaceutical Research and Therapeutics	2020

65.	In silico Screening and Molecular Docking of Bioactive Agents towards Human Coronavirus,	Mr. Pratyush Kumar	Pharmaceutical Chemistry	Journal of Pharmaceutical Research and Therapeutics	2020
66.	In silico Screening and Molecular Docking of Bioactive Agents towards Human Coronavirus,	Dr. Mrs. A. J. Asnani	Pharmaceutical Chemistry	Journal of Pharmaceutical Research and Therapeutics	2020
67.	Review on synthetic study of benzotriazole,	Dr. Mrs. A. J. Anani	Pharmaceutical Chemistry	GSC Biological and Pharmaceutical Sciences	2020
68.	Review on synthetic study of benzotriazole,	Mr. Pratyush Kumar	Pharmaceutical Chemistry	GSC Biological and Pharmaceutical Sciences	2020
69.	Synthesis and Evaluation of Mutual Pro-drugs of Ibuprofen as Non-steroidal Anti-Inflammatory Drugs with Antioxidants,	Dr. D.R. Chaple	Pharmaceutical Chemistry	World Journal of Pharmacy & Pharmaceutical Sciences	2020
70.	Synthesis and Evaluation of Mutual Pro-drugs of Ibuprofen as Non-steroidal Anti-Inflammatory Drugs with Antioxidants,	Dr. Mrs. A. J. Asnani	Pharmaceutical Chemistry	World Journal of Pharmacy & Pharmaceutical Sciences	2020
71.	AN OVERVIEW STUDY ON NASAL AND INTRANASAL DELIVERY OG DRUG	Barethiya Varsha, Kukde Abhijjet, Rajbhar Kusum, Dixit Gouri	Depart of Pharmaceutics	Journal of Medical Pharmaceutical and Allied Sciences	2020
72.	A REVIEW STUDY ON-MEDICATED LOZENGES AS AN EFFECTIVE DOSAGE FORM	Abhijeet Sunil Kukde1, Varsha M. Barethiya and Dr. Gouri R. Dixit	Depart of Pharmaceutics	World Journal of Pharmacy and Pharmaceutical Sciences	2020

73.	Screening of super disintegrants by formulating and evaluating fast dissolvingtablets of ondansetron hydrochloride	Kanchan P. Upadhye	Pharmaceutics	World Journal of Pharmaceutical sciences	2020
74.	Formulation and developmentof osmotic drug delivery system using push-pull techniques for BSC Class I drug	Suparna S. Bakhle	Pharmaceutics	Innovations in Pharmaceuticals and Pharmacotherapy,	2020
75.	A Novel Herbal Topical Formulation for WoundHealing	Dr. Mrs. S. A. Deshpane	Pharmacology	SSRN	2020
76.	A Novel Herbal Topical Formulation for WoundHealing	Mrs. S. V. Mangrulkar	Pharmacology	SSRN	2020
77.	A Novel Herbal Topical Formulation for WoundHealing	Dr. Mrs. A. J. Asanani	Pharmachemistry	SSRN	2020
78.	A Novel Herbal Topical Formulation for WoundHealing	Kumar Pratyush	Pharmachemistry	SSRN	2020
79.	A Novel Herbal Topical Formulation for WoundHealing	Dr. D. R. Chaple	Pharmachemistry	SSRN	2020
80.	FORMULATION AND EVALUATION OF ANTIFUNGAL HERBALHAIR GEL	Dr. Mrs. A. J. Asanani	Pharmachemistry	World Journal of Pharmaceutical Research	2020
81.	FORMULATION AND EVALUATION OF ANTIFUNGAL HERBALHAIR GEL	Dr. V. D. Gulkari	Pharmacognosy	World Journal of Pharmaceutical Research	2020

Review Article

ACTA SCIENTIFIC MICROBIOLOGY (ISSN: 2581-3226)

Volume 3 Issue 8 August 2020

Novel Corona Virus COVID-19: An Overview

Rohini Agrawal, Prashant Amale, Shilpa A Deshpande*, Priti Bhoyar, Kiran Gomkale and Sunchuwar

Priyadarshini J. L. Chaturvedi College of Pharmacy, Electronic Zone Building, MIDC, Nagpur, Maharashtra, India

***Corresponding Author:** Shilpa A Deshpande, Priyadarshini J. L. Chaturvedi College of Pharmacy, Electronic Zone Building, MIDC, Nagpur, Maharashtra, India.

DOI: 10.31080/ASMI.2020.03.0660

Received: May 26, 2020

Published: July 30, 2020

Abstract

Virus Disease of 2019 (COVID-19), was proclaimed as a pandemic emergency by World Health Organisation (WHO) in March 2020. The main causative factor behind the pneumonic viral infection is Severe Acute Respiratoty Syndrome Coronavirus - 2 (SARS-CoV-2) which holds the 75 - 80% nucleotide sequence similarity with SARS-CoV. Infected and asymptomatic individual are the primary source of human to human transmission due to it become a pandemic, the women with third trimester is also susceptible to this respiratory and pneumonic infection. The time period for the infection is 14 days and the average duration is of 20 days. The infection is clinically manifested mainly by fever, shortness of breath, Acute Respiratory Distress Syndrome (ARDS) etc. Various diagnostic approaches such as Nucleic Acid Amplification Test (NAAT) by using RT-PCR, serological testing etc had been used among which RT-PCR found to be successful in the detection of strain of SARS-CoV-2. Present review focus on the genomic structure of SARS-CoV-2, mechanism, transmission, entry into the host cell, diagnosis, and prevention of the Covid-19. This may be helpful for the development of therapeutic agents used for prophylaxis and treatment of SARS-CoV-2.

Keywords: Covid-19; Corona Virus; WHO; SARS-CoV-2; RT-PCR

Introduction

Corona virus disease (COVID-19); a pneumonic viral infection generated by Severe acute respiratory syndrome coronavirus -2 (SARS-CoV-2) and proclaimed on March 11, 2020 as pandemic by World Health Organisation (WHO) [1]. It is attributed by a respiratory syndrome with a different range of its seriousness from mild upper respiratory illness to severe interstitial pneumonia and acute respiratory distress syndrome (ARDS) [2,3].

Coronavirus

Coronavirus was first discovered 1960 belongs to the family of *Coronaviridae* and *Nidovirales* order with two subfamilies viz. *Orthocoronavirinae* and *Torovirinae* in which *Orthocoronavirinae* involves four genera α, γ and δ-coronavirus [4]. They include total 49 species under the major Riboviria of the suborder of *Cornidovirineae* [5]. The human coronavirus OC43 (HCoV-OC43), Human coronavirus (HCoV-HKU1), SARS-CoV, SARS-CoV-2 and Middle East Respiratory Syndrome Corona Virus (MERS-CoV) comes under β-coronavirus. Whereas genus and Human coronavirus NL63 (HCoV-NL63) and Human coronavirus 229E (HCoV-229E) comes under α-coronavirus genus. It belongs to the subgenus *Sarbecovirus* and mostly bears a resemblance with bat coronavirus (96.2%) [6]. But, intermediary host of transmission is still unknown.

REVIEW ARTICLE

INTERNATIONAL JOURNAL OF RESEARCH IN PHARMACEUTICAL SCIENCES

Published by JK Welfare & Pharmascope Foundation Journal Home Page: www.ijrps.com

Resveratrol: A Pleiotropic Phytoconstituent

Prashant N. Amale[1], Manish P. Deshmukh[2], Ashish B. Budhrani[3], Shilpa A. Deshpande[*1]

[1]Department of Pharmacology, Priyadarshini J. L College of Pharmacy, MIDC, Electronic Zone Building, Hingna Road, Nagpur, Pin-440016, Maharashtra, India
[2]Department of Pharmacology, Jawarharlal Nehru Medical College, Datta Meghe College of Pharmacy, Datta Meghe Institute of Medical Sciences (DU), Wardha, Pin-442001, Maharashtra, India
[3]Department of Pharmaceutics, Datta Meghe College of Pharmacy, Datta Meghe Institute of Medical Sciences (DU), Wardha, Pin-442001, Maharashtra, India

Article History:

Received on: 31 Jul 2020
Revised on: 23 Aug 2020
Accepted on: 02 Sep 2020

Keywords:

Resveratrol, Pleiotropic, phytoconstituents, pain, inflammation

ABSTRACT

Resveratrol (RSV) is a plant polyphenol or phytolexin phytoconstituents obtained from the grapes, berries, peanut, and wine. RSV is obtained from natural source and regarded as safe, effective, and hepatoprotective drug with no other serious organ toxicities are reported yet. This property of RSV makes it advantageous over the allopathic medicine having symptomatic cure and plethora of adverse effects. It's a cheap and widely available phytoconstituent approved in the global market in the active form as trans-resveratrol. It has multiple pharmacological actions including, analgesic, anti-inflammatory, anti-anxiety, anti-parkinsonian, anti-alzheimers, antioxidant, antidepressant, anti-cancer, anti-diabetic, anti-atherosclerotic effects. These effects are mediated via modulation of diverse underlying endogenous molecules like reactive oxygen species, nitric oxide, malonaldehyde, neutrophil, sirtulin, cyclo-oxygenase, inducible nitric oxide syntheses, superoxide dismutase, catalase, glutathione s-transferase, alpha-secretase, metalloproteinases, C-reactive protein, dopamine, nor-adrenaline, serotonin, cytokines (interleukins), nuclear factor kappa, signal transducer activator of transcription, brain derived neural nactor, neuropeptide, hypothalamo-pitutary axis, astroglia, mitochondrial dysfunction, glutamate, adrenergic, cholinergic, opioidergic, and purinergic receptors. Researchers are trying to explore its additional health benefits and preparing new analogues for better survival in the field. Present review will help to enlighten the multi-target pleiotropic pharmacological nature of a RSV in relation to the variety of the molecular targets modulation through extensive web science literature survey.

*Corresponding Author

Name: Shilpa A. Deshpande
Phone: +91-9422443171
Email: Shilpa@hotmail.co.in

ISSN: 0975-7538

DOI: https://doi.org/10.26452/ijrps.v11iSPL4.4325

Production and Hosted by

IJRPS | www.ijrps.com

INTRODUCTION

Resveratrol (RSV) is a polyphenol, abundantly found in grape (skin and seeds), berries, peanuts and wine. This compound has many properties, including activity against glycation, immune response, oxidative stress, inflammation, neurodegeneration, several types of cancer, and aging (Kataria and Khatkar, 2019). RSV is well tolerated phytoconstituent and believed to be a promising compound in preventing many diseases, like depression, diabetes, asthma and other complications (Chen

REVIEW ARTICLE

INTERNATIONAL JOURNAL OF RESEARCH IN PHARMACEUTICAL SCIENCES

Published by JK Welfare & Pharmascope Foundation Journal Home Page: www.ijrps.com

Evolutionary Role of Epigenetics in Ischemic Stroke: A Review

Rohini Agrawal[1], Prashant Amale[1], Shilpa Deshpande[1], Manish Deshmukh[2], Priti Bhoyar[1], Kiran Gomkale[1], Uma Sunchuwar[1], Ashish Budhrani[*3]

[1]Department of Pharmacology, Priyadarshini J. L College of Pharmacy, Electronic Zone Building, Nagpur-440016, Maharashtra, India
[2]Department of Pharmacology, Datta Meghe College of Pharmacy, Datta Meghe Institute of Medical Sciences (DU), Wardha-442001, Maharashtra, India
[3]Department of Pharmaceutics, Datta Meghe College of Pharmacy, Datta Meghe Institute of Medical Sciences (DU), Wardha-442001, Maharashtra, India

Article History:

Received on: 08 Sep 2020
Revised on: 05 Oct 2020
Accepted on: 08 Oct 2020

Keywords:

Epigenetics,
Ischemic stroke,
Excitotoxicity,
Stem cell,
REST

ABSTRACT

Stroke is a Central Nervous System (CNS) disorder which occurs due to the obstruction in the brain blood flow. Stroke is mainly of two types, such as ischemic and hemorrhagic stroke. Ischemic stroke (80%) caused due to obstruction of blood flow through Middle Cerebral Artery (MCA) and characterized by a decreased supply of oxygen and glucose to CNS. In comparison, Hemorrhagic stroke (20%) mainly occurs due to the rupturing of blood vessels. Epidemiologically, it is the common reason of death after cancer and affecting millions of global population. There are many risk factors such as hypertension; hypercholesterolemia etc. which can exaggerate the condition of stroke. Various conventional therapies like Antiplatelets, Thrombolytic are available, but, there is a need to obtain a therapeutic approach that can provide prevention as well as a cure for the stroke. So the present review is primarily focused on epigenetic approach for ischemic stroke by Endogenous Transplantation of Neural Stem/Progenitor Cells (NSPCs). This, in turn, will decrease the level of REST protein at the genetic level and enhance the activity of Na+-Ca+ exchanger activity and lowers the excitotoxicity.

*Corresponding Author

Name: Ashish Budhrani
Phone: 8888944700
Email: ashu.budhrani123@gmail.com

ISSN: 0975-7538

DOI: https://doi.org/10.26452/ijrps.v11iSPL4.4346

Production and Hosted by

IJRPS | www.ijrps.com

INTRODUCTION

Stroke is a debilitating neurological condition and defined as a sudden loss of functions of neurons including either loss of supply of glucose and oxygen, i.e. Cerebral Blood Occlusion (Ischemic Stroke) Figure 1 or inter cerebral bleeding (Haemorrhagic Stroke) (Moretti *et al.*, 2015). It shows symptom like limb weakness, bilateral or unilateral immobility, and inability to speak and become a reason of death and disability worldwide. It generally involves 1 in every 18 deaths and requires long-term care due to their functional and cognitive disabilities. There is a marked decrease in the survival rates of the victims suffering from ischemic stroke (68%) as compared to Haemorrhagic stroke (28%) (Krishnamurthi *et al.*, 2013). This is due to the formation of thrombus in the cerebral arteries, which leads to the obstruction of blood flow through the cerebral blood vessels, which cause irreversible cell injury. The present article is aimed to introduce the evolutionary epigenetic perspective for the prevention and treatment of ischemic stroke by endogenous

SEARCH WITHIN CONTENT

Search for...

Advanced Search Search on Google

FIND ARTICLE

Volume / Issue

21

ONLINE FIRST

Archive

VOLUME 24 (2023)
VOLUME 23 (2022)
VOLUME 22 (2021)
VOLUME 21 (2020)
VOLUME 20 (2019)
VOLUME 19 (2018)
VOLUME 18 (2017)
VOLUME 17 (2016)
VOLUME 16 (2015)
VOLUME 15 (2014)
VOLUME 14 (2013)
VOLUME 13 (2012)
VOLUME 12 (2011)
VOLUME 11 (2010)
VOLUME 10 (2009)
VOLUME 9 (2008)
VOLUME 8 (2007)
VOLUME 7 (2006)
VOLUME 6 (2005)
VOLUME 5 (2004)
VOLUME 4 (2003)
VOLUME 3 (2002)
VOLUME 2 (2001)
VOLUME 1 (1999)

Related articles

VOLUME **21 (2020)** > List of Articles

<<First <Prev Next> Last>>

ORIGINAL RESEARCH

Comparison of Efficacy of Topical Curcumin Gel with Triamcinolone-hyaluronidase Gel Individually and in Combination in the Treatment of Oral Submucous Fibrosis

Ashish B Lanjekar, Rahul R Bhowate, Suparna Bakhle, Abhay Narayane, Vipul Pawar, Ranjeet Gandagule

Keywords : Hyaluronidase mucoadhesive semisolid gel, Oral submucous fibrosis, Topical curcumin mucoadhesive semisolid gel, Triamcinolone acetonide mucoadhesive semisolid gel

Citation Information : Lanjekar AB, Bhowate RR, Bakhle S, Narayane A, Pawar V, Gandagule R. Comparison of Efficacy of Topical Curcumin Gel with Triamcinolone-hyaluronidase Gel Individually and in Combination in the Treatment of Oral Submucous Fibrosis. J Contemp Dent Pract 2020; 21 (1):83-90.

DOI: 10.5005/jp-journals-10024-2726

Published Online: 01-06-2018

Citations 17

ARTICLE REFERENCES

Abstract

Aim: To study the efficacy of topical curcumin mucoadhesive semisolid gel, triamcinolone acetonide/hyaluronidase mucoadhesive semisolid gel, and a combination of both in the treatment of oral submucous fibrosis (OSMF). **Materials and methods:** One hundred and twenty patients diagnosed with OSMF were randomly divided into groups I, II, and III. Each patients in groups I, II, and III was given professionally prepared mucoadhesive semisolid gel of curcumin, a combination of triamcinolone acetonide and hyaluronidase mucoadhesive semisolid gel, and a combination of all three, respectively. Patients were instructed to apply the gel thrice daily for 6 weeks on buccal mucosa bilaterally using the tip of index finger. Three parameters were evaluated at the end of each week, namely, mouth opening, burning on visual analog scale (VAS), and the color of oral mucosa on the binary scale. The results were subjected to statistical analysis. **Results:** It was observed that the group administered the three drug combinations achieved the greatest mouth opening (mean increase 4.05 mm) as compared to the other two groups. It was observed that triamcinolone and hyaluronidase group reported reduction in burning sensation on VAS (mean difference 6) as compared to the other two groups. It was observed that group III (1% curcumin, 1% hyaluronidase and 0.1% triamcinolone acetonide combined) drug therapy showed better change in mucosa color as compared to groups I (1% curcumin) and II. **Conclusion:** Thus, we can conclude that curcumin has a therapeutic effect on patients diagnosed with OSMF. Maximum utilization and enhanced drug delivery were achieved with the help of a combination other two active drugs, namely, triamcinolone and hyaluronidase. **Clinical significance:** Curcumin role in the treatment of oral cancers and the precancer lesion is very promising.

HTML XML PDF SHARE

<<First <Prev Next> Last>>

ISSN (Print) : 2321-3310; ISSN (Online) : 2321-3086
WORLD JOURNAL OF PHARMACEUTICAL SCIENCES
Published by ATOM and CELL PUBLISHERS

Screening of super disintegrants by formulating and evaluating fast dissolving tablets of ondansetron hydrochloride

Dhanashree R. Wasu
Department of Pharmaceutics, Priyadarshini J. L. College of Pharmacy, Hingna Road, Nagpur-440016, India

Kanchan P. Upadhye
Department of Pharmaceutics, Priyadarshini J. L. College of Pharmacy, Hingna Road, Nagpur-440016, India

Keywords: Fast dissolving tablets, super disintegrants, Ondansetron Hydrochloride

ABSTRACT

For a fast dissolving tablet to show fast disintegration, super disintegrants play a vital role. The objective of the present study is to screen three super disintegrants namely Cross carmallose sodium, Sodium starch glycolate and Cross povidone by formulating fast dissolving tablets and evaluating them. First, the tablet blends were subjected to pre compression parameters (bulk density, tapped density, angle of repose, Hausner's ratio and Car's index). Then the tablet blends were formulated in fast dissolving tablets of 200 mg each of Ondansetron Hydrochloride by direct compression method. The tablets of various batches had varied concentrations of the three super disintegrants individually. The tablets were then evaluated for various post compression parameters (weight variation, thickness, hardness, friability, wetting time, water absorption ratio, disintegration time, drug content and *in-vitro* drug release). Out of all the batches the formulation T8 showed best results which implied that Cross Povidone can be considered as a good super disintegrant and that batch was optimised.

Review Article

Hemorrhoids: A Review on Herbal Treatments and Models for Pharmacological Evaluation

Priti S. Bhoyar*, Shilpa A. Deshpande, Prashant N. Amle, Kiran M. Gomkale, Rohini N. Agrawal, Uma P. Sunchuwar
Pharmacology Department, Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur, India.
***Corresponding author's E-mail:** pritibhoyar7@gmail.com

Received: 26-04-2020; **Revised:** 25-06-2020; **Accepted:** 03-07-2020.

ABSTRACT

Hemorrhoids are the most common anorectal disease which is characterized by alteration in vasculature of the anal canal including blood vessels, supporting tissues, muscles and elastic fibers. The aim of this review is to determine the importance of herbal drug in the treatment of hemorrhoids and pharmacological evaluation by using some models and in vitro studies. The role of *Acacia ferruginea, Allium iranicum, Balanites aegyptiaca, Euphorbia prostrata, Malva sylvestris, Myrtus communis, Phlomis grandiflora, Polygonum cognatum, Portulaca oleracea, Wendlandia heynei* in hemorrhoid treatment are discussed. According to this review it is found that above mentioned herbal plants decreased the level of inflammatory mediators and contributed to healing of hemorrhoidal edema.

Keywords: Hemorrhoid, Inflammatory mediators, Flavonoid, croton oil, Jatropha oil.

INTRODUCTION

Hemorrhoids are the most common anorectal disease[1] characterized by alteration in vasculature of the anal canal including blood vessels supporting tissues, muscles and elastic fibres.[2]There is a network of small veins within the inner lining of the anus and lower rectum. These veins occasionally become wider and engorged with more blood than usual. These engorged veins and the overlying tissue may then develop into one or more small areas of swelling called hemorrhoids.[3]

The symptoms of hemorrhoids are discomfort, itching, pain, inflammation, bleeding.[4] Various factors are responsible for hemorrhoids like constipation, life style, pregnancy, low fiber diet, obesity and other environmental factors.[5] There are three types of Hemorrhoids: Internal Hemorrhoids, External Hemorrhoids, Mixed Hemorrhoids.

Internal Hemorrhoids begin above the dentate line which are covered by mucosa, typically bleed or prolapsed but do not cause pain. It is divided into four categories depending on the grade of prolapsed.

I. Grade 1: Protrudes in the anal canal but does not prolapse
II. Grade 2: Prolapses but reduces spontaneously.
III. Grade 3: Prolapses and requires manual reduction.
IV. Grade 4: Irreducible prolapsed.

External hemorrhoids originate below the dentate line which cause pain and itching.

Mixed hemorrhoids indicate lesions that arise at the dentate line or the term can be used to describe the presences of both internal and external hemorrhoids.[6]

The exact pathophysiology of hemorrhoids is poorly understood. There are four theories of the pathophysiology of hemorrhoids. First, the vericose vein theory[7] which suggested that hemorrhoids are caused by vericose veins in the anal canal, has been shown to be faulty, because hemorrhoids and anorectal varices are proven to be different.[8] Second, the theory of vascular hyperplasia that hemorrhoids resemble penile erectile tissue and third, internal anal sphincter hypertonia, but both are not completely accepted.[9] The pathological changes occur like abnormal venous dilatation, vascular thrombosis, degenerative process in the collagen fibers and fibroelastic tissues, distoration and rupture of the anal subepithelial muscle along with this, changes a severe inflammatory reaction, mucosal ulceration, ischemia and thrombosis.[10]

Plant Sources Used in Treatment of Hemorrhoids

1. *Acacia ferruginea* DC.

It is deciduous tree belonging to family *Mimosoideae*.[11] The bark of the plant is bitter and used as astringent, cure itching, leukoderma, ulcers, stomatitis and blood related diseases. The *A. ferruginea* is a rich source of tannins (catechin, epigallocatechin), terpenoids, polyphenolics (gallic acid) and saponins. Also, the flavonoids, phenols, alkaloids, terpenoids, anthraquinones are chemical constituents of *A. ferruginea*. Glycosides and saponins are also present in trace amounts.[12]

The flavonoids in *A. ferruginea* reduce the concentration of PGE_{2e}, $PGE_{2\alpha}$ and others inflammatory mediator. It also increases the vascular tone and reduces the vascular fragility and resistance. The antioxidant and ant hemorrhoidal activity are due to presence of flavonoids in the bark of *A. ferruginea*.[2]

2. *Aesculus hippocastunum*

Aesculus hippocastunum belonging to family *Sapindaceae* is a large deciduous tree known as horse-chestnut or

Synthesis, physicochemical characterization and analgesic evaluation of some new thieno [*2,3-D*] Pyrimidin 4(3*H*) one derivatives

Dinesh P Kawade[1*], Dinesh R Chaple[2], Pramod B Khedekar[3]

[1]Associate Professor, [2]Professor and Principal, [3]Professor, [1,2]Dept. of Pharmaceutical Chemistry, [3]Dept. of Pharmaceutical Sciences, [1,2]Priyadarshini J. L. College of Pharmacy, Nagpur, Maharashtra, [3]Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, Maharashtra, India

***Corresponding Author: Dinesh P Kawade**
Email: drdinesh03@gmail.com

Abstract
A $POCl_3$ catalyzed, efficient, one-step and solvent-free synthesis of novel thieno [2,3-d] pyrimidin-4(3*H*)-one derivatives from 2-amino-4,5-substitutedthiophene-3-carbonitrile has been developed using various aliphatic acid under both conventional heating and microwave irradiation techniques. The formation of compounds was confirmed via elemental analysis and spectroscopic techniques like FTIR, ^{1}HNMR and mass spectroscopy. All synthesized compounds have been screened for their analgesic activity by using Eddy´s hot plate method. The synthesized compounds 2d, 2k and 2h showed good analgesic activity and compounds 2a, 2b, 2g and 2i showed moderate whereas remaining compounds possessed less analgesic activity compared with standard, Tramadol.

Keywords: $POCl_3$, Thieno[2,3-d]pyrimidin-4 (3*H*)-one, Analgesic activity, Eddy´s hot plate.

Introduction
Medication revelation is ceaseless and iterative process, which begin with the recognizable proof of lead atom of wanted natural activity (lead age and closures with the streamlining of this lead (lead advancement) for choice of new hopeful particle in sedate improvement.[1] The attention to synthetic, physical physiological, biochemical properties, receptor locales, SAR and stereochemistry and so on is extremely huge in sedate plan for the fruitful advancement of medication particle.[2] Since, sedate plan is a coordinated for building up the train which forecasts a time of adjusted medication, a medication lacking symptom. It looks to clarify impacts of natural structure or its physicochemical properties included.[3] It examines the procedures by which the medication s delivered their belongings; how they respond with the cellular material of inspire a specific pharmacological impact or reaction. How they changed or detoxified, used or disposal by living being.[4] These ideas are the building stones whereupon the structure of medication configuration in assembled. The various new advancements have been created and connected in tranquilize innovative work (R&D) to abbreviate the examination cycle and to decrease the costs[5]. Among them, computational methodologies have upset the pipeline of disclosure and advancement over the most recent 40 year, computational advances for medicate R&D have advanced rapidly, particularly in late decades with the extraordinary improvement of science, biomedicine, and PC ability.[6] The computational instruments have been connected in relatively every phase of medication R&D, which have incredibly changed the system of medication disclosure.[7] Aggravation is a neighborhood response of the vascular and supporting components of a tissue to damage bringing about the arrangement of protein-rich exudates; it is defensive reaction of the non particular insusceptible framework that serve to limit, kill, or to crush a harmful operator in planning for the way toward recuperating. The indication of aggravation are rubor (redness), calor (warm), dolor (pain), tumor (swelling), and functio lasea (loss of function).[8] Agony is an attributes neurophysical sensation emerging from a harmful boost.[9] It is isolated into integumental agony (i.e. shallow, identified with skin, muscle and joints) and instinctive torment (i.e Deep situated, related to heart, stomach, kidney and rankle bladder). Nonsteroidal calming drug and broadly utilized for the treatment of different incendiary infections and also to remember the hurts and agony.[10] They apply their restorative impact through down control of prostaglandin blend by restraining the rate restricting cyclooxygenase (COX) catalyst engaged with the provocative course.[11] Despite the fact that this medication are for the most part all around endured in understanding with joint condition, a high frequency of gastrointestinal symptom, for example, mucosal injury, discharge, and ulceration has been a significant issue in their medicine. These present helpful insufficiencies force the need to create more secure medication.[12]

An analgesics or painkillers are 'agents that relieve pain by elevating the pain threshold without disturbing consciousness or altering sensory-modalities'. Besides 'pain' may also be defined in psychological perspective as –'a particular type of sensory experience distinguished by nerve tissue from sensations, such as: touch, heat, pressure and cold.[13]

Thiophene containing compounds are well known to exhibit various biological effects. Heterocycles containing the thienopyrimidine moiety are of curiosity because of their intresting pharmacological and biological activities.[20-22] They bear structural analogy and isoelectronic relation to purine and several substitutedthieno[2,3-*d*] pyrimidine derivatives shown to exhibit prominent and versatile biological activities.[23-24] Over the last two decades, many thienopyrimidines have been found to exhibit a variety of synthesized as potencial anticancer,[25] analgesic,[26] antimicrobial[27,28] and antiviral agents.[29]

EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 7
Issue: 5
585-591
Year: 2020

PREPARATION AND EVALUATIONS OF DIATRIZOATE SODIUM LIQUID ORAL FORMULATION

Vishal D. Dakhale*, Dinesh P. Kawade, Srushti L. Wairagade

Department of Pharmaceutical Chemistry, Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur - 440016 (Maharashtra), India.

***Corresponding Author: Vishal D. Dakhale**
Department of Pharmaceutical Chemistry, Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur - 440016 (Maharashtra), India.

Article Received on 09/03/2020 **Article Revised on 30/03/2020** **Article Accepted on 20/04/2020**

ABSTRACT
X-ray diagnostic agents (contrast media) are widely used as adjuncts to diagnostic visualization techniques as they help to illustrate the differences between tissues by introducing them to the area of interest to increase its density and absorption of X-rays. Diatrizoic acid is radio opaque ionic contrast media utilized orally and parentrally for symptomatic purpose. The goal of this investigation is to develop a liquid oral contrast media and evaluate the physicochemical parameter were compared with the changes in accelerated stability testing for the documentation of these plan nearby with FTIR information. Quality of final solution was evaluated with the parameters: pH, iodine iodide test and drug content. Three batches were formulated of the solution. All the batches were evaluated for physicochemical parameters, pH and drug content. The formulated batches under gone stability studies, no turbidity were observed for 60 days studies. All the batches assure the reproducibility and each parameter were complying with specifications.

KEYWORDS: Diatrizoate sodium, oral liquid formulation, contrast media.

1. INTRODUCTION
Diatrizoic acid is a contrast agent used during X-rays. This incorporates when envisioning veins, the urinary framework, spleen, and joints, just as during PC tomography (CT filter). It is controlled by oral, parenteral, and so forth. Diatrizoic acid is an iodinated ionic radiocontrast operator with high osmolality with USP standard medication. [1][2] The IUPAC name of medication is Sodium 3,5-diacetamido-2,4,6-triiodobenzoic acid. It's a fluid oral detailing containing one or more active ingredients in a suitable vehicle; they may in some cases consist simply of a liquid active ingredient used as such.[3] The reason for this examination is that to archived the plan based documentation and with strategy for arrangement and their assessment parameters. The motivation behind this investigation is that to reported the definition based documentation and with strategy for planning and their assessment parameters. By the solvency, stability, drug content (assay) and FT-IR study.[4]

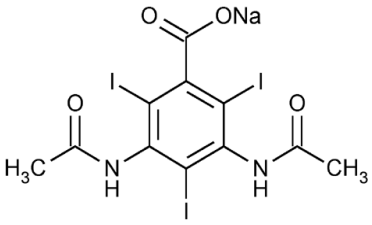

Figure 1: Structure of Diatrizoic Acid.

2. Experimental Work[5]
2.1 Formulation of Diatrizoic Acid
The ingredients utilized for plan depends on mechanical cluster producing record (BMR) information, with monetarily acknowledged and utilizing seasoning operator for patients convince.

Table 1: Formulation of Diatrizoic Sodium.

Sr. No.	Ingredient	Uses	Quantity Taken
1.	Diatrizoic Acid USP	Active Ingredient	87.50 g
2.	Sodium Hydroxide	Base	5.42 g
3.	Sodium Citrate	Acidity Regulator	0.50 g
4.	Disodium EDTA	Chelating agent/ Stabilizer	90.02 g
5.	Methyl Paraben	Preservative	q.s.

International Journal of Research in Pharmacy and Pharmaceutical Sciences
ISSN: 2455-698X; Impact Factor: RJIF 5.22
Received: 09-02-2020; Accepted: 02-03-2020; Published: 07-03-2020
www.pharmacyjournal.in
Volume 5; Issue 2; 2020; Page No. 01-09

SARS coronavirus: A review of threat in global world

Pallavi Chandewar[1], Bhairavi Chavhan[2], Atish Sahare[3], Pooja Deshpande[4], Dinesh Kawade[5*]
[1-4] Bajiraoji Karanjekar College of Pharmacy, Sakoli, Distt Bhandara, Maharashtra, India
[5] Priyadarshini JL College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur, Maharashtra, India

Abstract
The coronavirus the cause of an outbreak of respiratory illness in Wuhan, Hubei Province, China beginning in December 2019. This virus appears to be a new human pathogen to causes Severe Acute Respiratory Syndrome (SARS) and get quickly spread to all over world before it was controlled. Initially, the new virus was called 2019-nCoV. Subsequently, the task of experts of the International Committee on Taxonomy of Viruses (ICTV) termed it the SARS-CoV-2 virus. Human corona viruses most commonly spread from an infected person to others through respiratory droplets, close personal contact with an infected person or by touching an object or surface infected with the corona virus and then touching the same hand to mouth or eye. Till now, there is no approved antiviral drug or vaccine for the management of infection by coronavirus. However, from earlier experience, many therapeutic agents are being used in the treatment of SARS-CoV-2 virus. The World Health Organization announced that the outbreaks of the novel coronavirus have constituted a public health emergency of international concern. Infection control measures are necessary to prevent the virus from further spreading and to help control the epidemic situation. This article, based on available literature evidence, introduces coronavirus through its structure, pathogenesis, etiology, diagnosis, clinical features, and prevention and control and therapeutic options.

Keywords: SARS coronavirus, structure, pathogenesis, clinical features, diagnosis, therapeutic options

1. Introduction

In corona virus, the word corona represents crown-like spikes on the outer surface of the virus; thus it was named as a corona virus. These are minute in size ranging from 65-125 nm in diameter, and contain a single stranded RNA ranges in size 26-32kbs in length [1]. 36 corona viruses belongs to the family Coronaviridae within the order Nidovirales, which are responsible for causing respiratory infections or intestinal infections in the humans or animals. SAR-CoV belongs among these 36 corona viruses, responsible for severe respiratory infections [2].

There are mainly four types of genera of coronaviridae family which include Alfacoronavirus, Betacoronavirus, Deltacoronavirus and Gamacoronavirus as well as it include several subgenera and species. The variety of corona viruses are mainly found in humans and animals. There are different types of Human Coronaviruses (HCoVs) are present which include HCoV-229 and HCoV-NL63 which come under the genus alfacoronavirus, at the same time HCoV-OC43 and HCoV-HKU1 which are belongs to the subgenus Embecovirus of genus betacoronavirus. In 1960s, the human coronaviruses were firstly isolated in cell culture from person with upper respiratory infections. These were later designated as HCoV-229E and HCoV-OC43. Also in early 2000s, the HCoV-NL63 and HCoV-HKU1 were discovered from person suffering from bronchiolitis and pneumonia. Later in 2002, Severe Acute Respiratory Syndrome related coronavirus (SAR-CoV) (the name taken from severe respiratory disease) was originated from a betacoronavirus in lineage B (subgenus: Sarbecovirus) from bats and then spread through civets to human in the Guangdong province of southern china. In 2012 the name Middle East Respiratory Syndrome related coronavirus (MERS-CoV) which have similar clinical syndrome as like SARS which spread from camel to human in Saudi Arabia [3]. The mammals are mainly affected by the alpha and betacoronavirus, while gamma and deltacoronavirus infect the birds but in some cases they found to infect the mammals. The respiratory illness in humans and gastroenteritis in animals usually cause due to alfa and betacoronaviruses. In humans, the severe respiratory syndrome cause due to highly pathogenic viruses i.e. SAR-CoV and MERS-CoV and the mild upper respiratory disease in immunocompete hosts cause due to other four human coronaviruses include CoV-NL63, HCoV-229E, HCoV-OC43 and HCov-HKU1; although some of them are also responsible for severe infections in infants, young children and elderly individual [4]. World Wide, the reason of increase in fatality rate and pulmonary failure is due to highly pathogenic viruses like SAR-CoV, H5N1 influenza A, H1N1 2009 and MERS-CoV which cause acute lung injury (ALI) and acute respiratory distress syndrome (ARDS) [1]. In China, at the end of 2019, the first fifty days were epidemic because within those days, Wuhan an emerging business hub of China experienced an outbreak of a novel coronavirus that killed more than eighteen hundred and infected over seventy thousand individuals. Initially, the researchers focused on spreadability and infectivity of virus and on that basis it was suggested that the patients suffering from coronavirus firstly induce pneumonia in China, may have visited to the seafood market where live animals were sold or may have used infected animals or birds as a source of food. However, further investigations revealed that some individuals also get infected even they were not visiting to seafood market. These observation indicated that virus have capability to spread from human to human, which was subsequently reported in more than 200 countries in the world. The activities like close contact with infected person

Research Article

Formulation and Evaluation of Vitamin E Enriched Cold Cream with Almond oil as an Internal Phase

Varsha Barethiya*, Abhijeet Kukde, Ashish Badwaik, Dr. Alpana Asnani, Dr. Gouri Dixit
Department of Pharmaceutics, Priyadarshini J.L.College of Pharmacy, Hingna Road, Nagpur-440016, Maharashtra, India.
***Corresponding author's E-mail:** varshabarethiya@gmail.com

Received: 18-05-2020; **Revised:** 22-07-2020; **Accepted:** 30-07-2020.

ABSTRACT

The aim of the present study is to formulate and evaluate cold cream enriched with vitamin E and almond oil providing moisturizing effect. The cold cream was prepared by incorporating beeswax, borax, sweet almond oil, vitamin E and all other excipients. Fusion method is used for the formulation of the cold cream. Five different formulations are prepared and evaluated for the compliance with the pharmacopoeial parameters. All the prepared formulations are evaluated for the various parameters like pH, color, homogeneity test, viscosity, rheological studies, stability studies, etc. Among all the formulations, F4 shows the best result and all the parameters comply with the IP standards. Stability studies proved that there are no significant changes in the formulated cold cream. Thus, it is concluded that the vitamin E enriched cold cream is well formulated and evaluated with almond oil as an internal phase.

Keywords: cold cream, sweet almond oil, rheological studies, stability studies, homogeneity.

INTRODUCTION

In the pharmaceutical markets, several dosage forms are designed and introduced by considering the patient needs to obtain more patient compliance and providing faster relief. All the dosage forms are having best properties and also some drawbacks are associated with it. Over the last years the treatment of illness has been accomplished by administering drugs to human body via various routes namely oral, sublingual, rectal, parental, topical, inhalation, etc. Among all the dosage form, for the topical application, creams are considered as superior over other dosage forms. Topical delivery can be defined as the application of a drug containing formulation to the skin to directly treat cutaneous disorder or the cutaneous manifestations of a general disease (e.g. psoriasis) with the intent of containing the pharmacological or the effect of drug to the surface of the skin or within the skin semi-solid formulations in all their diversity dominate the system for topical delivery, but foams, sprays, medicated powders, solutions and even medicated adhesive systems are in use.[1]

Cream is a topical preparation used for application to the skin where it gets absorbed through the various layer of the skin and it can also apply on the body parts such as face, hands, legs, skin etc. Creams are defined as, the semisolid dosage forms containing one or more medicinal substances dissolved or dispersed in suitable bases to form a homogenous mass. This term has traditionally been applied to semisolids that possess a relatively fluid consistency formulated as either water-in-oil (e.g. cold cream) or oil-in-water (e.g. vanishing cream) emulsions. Creams are considered as pharmaceutical products and cosmetic products as per their application. Medicated creams are the creams containing the medicinal substances and used to treat the skin related disorders. Un medicated creams are highly used in a variety of skin conditions (dermatoses) but they are not containing any medicinal substances. The use of the fingertip unit concept found to be helpful in guiding how much amount of topical cream is required to cover different areas.

The term has been restricted to products consisting of oil-in-water emulsions or aqueous microcrystalline dispersions of long-chain fatty acids or alcohols that are water washable and more cosmetically and aesthetically acceptable. Creams are used for the multiple purposes like to enhance beauty, to get therapeutic effect, to relieve sun burn, and moisturized skin, as a makeup base, etc. Medicated creams are used for treating various skin related conditions such as psoriasis, dermatitis, burns, vaginal infections (e.g. Triple Sulfa Vaginal Cream), dry skin, etc. Galen, a Greek doctor, discovered the cold cream and in the second century, he prepared the formulation of cold cream which was popularly known as 'Galen's cream'. He prepared the formulation by using an emulsion water and beeswax along with rose petals as the vital moisturizer ingredients of the cold cream. Cold creams not only moisturize the skin but are also used for removing makeup and temporary tattoo marks. The cream is rubbed on tattoo marks and then erased with a cotton ball. Cold cream uses are also associated with preparation of facial paints for kids.

Cold cream is useful for keeping the skin moisturized and emollient all the time, especially all through the winters by protecting the skin from becoming dry and avoids aggravation of skin problems during the cold season. It stretches and then faint lines of crack develop over lips and cheeks. If proper care is not taken, these cracks may further become red. A plethora of cold creams are seen

Review Article

Dissolution - A Quality Parameter for Testing of Pharmaceutical Dosage Form

Kusum Rajbhar[1]*, Yogita Jain[1], Varsha Barethiya[1], Shanu Sahu[1], Dr. Mrs. Gouri R. Dixit[2]

[1] Research scholar- Department of Pharmaceutics, Priyadarshini J.L. College of Pharmacy, Nagpur, India.

[2] Assistant Professor- Department of Pharmaceutics, Priyadarshini J.L. College of Pharmacy, Electronic zone building, Nagpur, Maharashtra, India.

***Corresponding author's E-mail:** kusumrajbhar02@gmail.com

Received: 15-05-2020; **Revised:** 22-07-2020; **Accepted:** 30-07-2020.

ABSTRACT

In the pharmaceutical industry, dissolution study is one of the vital tests for the evaluation of the pharmaceutical dosage form. Dissolution test is the most important tool for the testing of drug release profile of solid dosage form in the pharmaceutical preparation. Dissolution studies provide the knowledge about the efficacy of the dosage form. Dissolution tests are major for performing a various kind of investigations like drug degradation profiles, stability and shelf life studies, chemical stability and so on. Dissolution test can be easily performed in both the small and large scale with the proper techniques and it is also used for the comparison between the graph profile of the similar and different dosage form. Hence, it can be considered as the most qualitative and convenient test for the evaluation of the pharmaceutical solid dosage form.

Keywords: Dissolution, similarity factor, biopharmaceutical class, validation.

INTRODUCTION

Dissolution testing is a basic tool which is broadly used in the development of another pharmaceutical product. The test, in its most direct structure, consists of placing the formulation in a dissolution apparatus containing reasonable dissolution medium, allowing it to dissolve over a specified period of time and then assaying the resultant solution using appropriate analytical method to determine the measure of medication. Dissolution tests are significant for a variety of investigations like medication degradation profiles, stability and shelf life studies, physical and mechanical testing of dosage forms, upcoming QC testing on raw materials etc.

In-vitro dissolution testing serves as a significant tool for characterizing the biopharmaceutical quality of a product for additional turn of events and for evaluation of active ingredients/drug substances. In-vitro dissolution data are supportive in the evaluation and interpretation of potential risks, mainly in the case of controlled/modified-release dosage forms - for example as regards dose dumping, food impacts on bioavailability or interaction with other medications, which impact gastrointestinal environmental conditions. Biopharmaceutical aspects are as significant for stability concerns as they are for batch release after production, in-vitro dissolution being of high relevance in quality control and quality assurance. Last but not least, in-vitro dissolution information will be vital when assessing changes in production site, manufacturing procedure or formulation and assist in decisions concerning the requirement for bioavailability studies.

None of these purposes can be satisfied by an in-vitro test system without sufficient reliability. Reliability here would be characterized as the system being experimentally sound, yielding precise, accurate, repeatable outcomes and with adequate information on the in-vivo significance of the dissolution data obtained. Prerequisites for dissolution testing have been assessed in the literature. Since in-vitro dissolution is a physical test, characterized by convention and is of a destructive nature, proving reliability requires exceptional consideration. It therefore is within the scope of these Guidelines to characterize appropriate testing equipment and experimental design as well as to suggest the background for adequate physical and analytical validation, along with verification procedures according to the state of biopharmaceutical science. The Guidelines are primarily devoted to solid oral products. However, the general ideas may be adapted to in-vitro dissolution analysis of drug materials/powders, semisolid oral products, suppositories and, with distinctive limitations, to other non-oral products. [1-3]

History

The study of the dissolution procedure has been established since the end of the 19th century by physical chemists. Therefore, most of the important research in the field was not related to medications at all, and the basic laws for the depiction of the dissolution procedure were already available when interest in drug dissolution started to increase. In spite of the advances in vitro dissolution in chemical engineering sciences, in the pharmaceutical sciences the idea was not utilized broadly until the early 1950s.Until then the in vivo availability of the drug was thought to be determined exclusively by the disintegration of the tablet. For orally administered non-solution dosage forms, in vitro performance test procedures such as dissolution and disintegration are

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES
Kusum *et al.* World Journal of Pharmacy and Pharmaceutical Sciences
SJIF Impact Factor 7.632
Volume 9, Issue 9, 1286-1312 Review Article ISSN 2278 – 4357

A REVIEW: ON HERBAL DRUGS USED IN COGNITIVE IMPAIRMENT

Kusum Rajbhar[1]*, M. S. Sahu[2], Gouri R. Dixit[3], P. J. Bansod[4], Varsha Barethiya[5] and Shanu Sahu[6]

[1,3,5,6]Department of Pharmaceutics, Priyadarshini J.L. College of Pharmacy, Electronic Zone Building, Nagpur, Maharashtra, India- 440016.

[2,4]Sonekar College of Pharmacy, Devi Road, Mahadula, Koradi, Nagpur- 441111.

Article Received on
17 July 2020,

Revised on 07 August 2020,
Accepted on 27 August 2020

DOI: 10.20959/wjpps20209-17170

***Corresponding Author**
Kusum Rajbhar
Department of Pharmaceutics, Priyadarshini J.L. College of Pharmacy, Electronic Zone Building, Nagpur, Maharashtra, India- 440016.

ABSTRACT

Cognitive impairment is the CNS related disorder which causes the disbalance of the individual memories. Dysfunctioning of the brain may be causes due to the several reasons like psychosis condition, depression, diabetic medication, malfunctioning of endocrine glands, etc. Various treatments are available to treat this state of mind occurs due to the impairment of brain conditions. Some conventional drugs used for the treatment of the cognitive impairment may results into the side effects. To avoid these side effects, there is a need to develop a medication using herbal drugs. Hence, the presented review article shows the detail study about the herbal drugs used as an alternative for conventional drugs which leads to the decrement of the associated side effects of the conventional synthetic drugs.

KEYWORDS: brain dysfunction, herbal drug, conventional drug, cognitive impairment, memory.

INTRODUCTION

Cognition

The word cognition comes from the Latin verb cognosco (con with and gnosco know) meaning to conceptualize or to recognize.[1]

Cognition is the set of all mental abilities and processes associated to knowledge, attention, memory and working memory, decision and assessment, reasoning and calculation, problem resolving and decision making, understanding and production of language.[2]

Content available at: iponlinejournal.com

IP International Journal of Comprehensive and Advanced Pharmacology

Journal homepage: www.ipinnovative.com

Review Article

A comprehensive review on current strategies and developments in treatment of skeletal muscle atrophy

Shubhada V Mangrulkar[1,*], Dinesh Chaple[2], Sukanya Korewar[1], Priyanka Mazumdar[1], Twinkle Charde[1]

[1]*Dept. of Pharmacology, Priyadarshini J L College of Pharmacy Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, Maharashtra, India*
[2]*Dept. of Pharmaceutical Chemistry, Priyadarshini J L College of Pharmacy Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, Maharashtra, India*

ARTICLE INFO

Article history:
Received 30-06-2020
Accepted 11-07-2020
Available online 25-07-2020

Keywords:
Skeletal muscle atrophy
Emerging treatment
Ultrasound therapy
Herbal drugs
Nutraceuticals

ABSTRACT

Background: Skeletal muscle atrophy is most remarkable example of multiple changes in physiological state and leads to morbidity. The predominance of skeletal muscle atrophy and the effect of this issue on the patient and family underscore the requirement for effective treatment strategies. Skeletal muscle has the capability of restoration after injury but can be evoked by various pathological conditions.
Main body: Treatments that can increase muscle mass and physical performance might be a promising alternative. The aim of review is to give comprehensive overview over the epidemiology of current potential treatment strategies of muscle atrophy. This review is focused on various treatments strategies like herbal treatment, synthetic drugs, physical therapy, focused ultrasound therapy, and emerging medication etc. which promotes skeletal muscle repair and functional regeneration.
Conclusion: The fact is that the reported drugs are not efficiently targeting every proteolytic system. There is the need for combinational treatment and developing a novel approach to treat skeletal muscle wasting.

1. Introduction

Skeletal muscle is the most abundant tissue in human body, which has the ability of rejuvenation up to the certain threshold of injury. Muscle atrophy is one of the social problem detected. Muscle atrophy is the loss of muscle mass fiber and its strength which losses its capability of regeneration after muscle injuries like high energy traffic accidents, blast distress, combat injuries, surgical and orthopedic situations, etc. [1] Many pathological conditions like cachexia, diabetes, sepsis, starvation, metabolic acidosis, chronic kidney disease, immobilization, obesity etc. leads to muscle atrophy. [2] There is imbalance between catabolic and anabolic signaling pathways. [3] The increased prevalence of muscle atrophy is observed over the population due to age, metabolic disorders and changed lifestyle many peoples of rural and urban are in misery with muscle atrophy. [4]

Various pathological conations alters the anabolic and catabolic signaling pathways. In muscle, IGF-1 is stimulated by mechanical stacking and contraction to which IGF receptor (IGFR) is activated in the cell to allow for membrane bound protein signaling pathways to become active. IGF-1 is secreted from muscle fibers into the extracellular matrix (ECM) to which it is bound by IGF binding proteins (IGFBPs). 18135–18140. The half-life of IGF-1 is just 5–10 min, these pools of IGFBPs must be local to the ECM. Upon binding to IGFBPs, IGF-1 stimulates its receptor to which intracellular signaling processes driving MPS can occur. [5] GF-1 enters the cell via IGFR, it triggers phosphoinositide 3-kinase (P13-K) to generate phosphatidylinositol -bisphosphate (PIP2), leading to the production of phosphatidylinositol 3, 4, 5-trisphosphate

* *Corresponding author*.
E-mail address: shubhadamangrulkar@gmail.com (S. V. Mangrulkar).

https://doi.org/10.18231/j.ijcaap.2020.017

International Journal of Pharmaceutical Science and Research
ISSN: 2455-4685; Impact Factor: RJIF 5.28
Received: 19-02-2020; Accepted: 11-03-2020; Published: 26-03-2020
www.pharmacyjournal.net
Volume 5; Issue 1; 2020; Page No. 41-47

Recent Insights into Some Emerging Natural Resources with Remarkable Hepatoprotective Potentials

Gayatri Katole[1], Neelam Khan[2*], Debarshi Kar Mahapatra[3], Pratik Nandi[4], Anshu Dudhe[5], Vaibhav P Uplanchiwar[6], Lalchand Devhare[7], Kumar Pratyush[8], Namrata S Mane[9], Minal M Khode[10], Arti J Darode[11], Dippyoman Guha[12]

[1] Research Scholar, Oriental College of Pharmacy and Research, Oriental University, Indore, Madhya Pradesh, India
[2] Associate Professor, Oriental College of Pharmacy and Research, Oriental University, Indore, Madhya Pradesh, India
[3] Assistant Professor, Department of Pharmaceutical Chemistry, Dadasaheb Balpande College of Pharmacy, Nagpur, Maharashtra, India
[4] Faculty of Biology, KKR Gautham's Education Institution, Vijayawada, Dist. Krishna, Andhra Pradesh, India
[5, 6, 7] Assistant Professor, School of Pharmacy, G. H. Raisoni University, Chhindwara, Madhya Pradesh, India
[8] Assistant Professor, Department of Pharmaceutical Chemistry, Priyadarshini J. L. College of Pharmacy, Nagpur, Maharashtra, India
[9] Professor and Head of Department, Nagpur College of Pharmacy, Nagpur, Maharastra, India
[10] Assistant Professor, Bhausaheb Mulak Ayurvedic College and Research Hospital, Nagpur, Maharashtra, India
[11] Lecturer, Department of Pharmaceutics, Mouda College of Pharmacy, Mouda, Dist. Nagpur, Maharashtra, India
[12] Research Scholar, Department of Pharmaceutical Sciences, BIT Mesra, Ranchi, Jharkhand, India

Abstract
Liver an accessory digestive organ present in vertebrates results in detoxification of the metabolites, synthesis of protein, generation of necessary biochemicals such as bile, as well an energy reservoir in form of glycogen. Liver disease also named as hepatic disease creates a toll in the hepatic management causing an effect on overall functions of Liver. The motto of our present study is based on the hepatotoxicity management of liver based on traditional herbal medicine. Liver diseases has hundreds of symptoms among which we addressed specifically oxidative stress, anomaly in protein distribution, fat related peripheral catabolism, concurrent viral hepatitis, increased redox ratio, retention of liver cell water and viral proteins, effected cell mediated immunity, fibrogenesis, and inflammation. This review article describes the various natural resources (plant extracts) of diverse families having hepatoprotective effects and the active constituents responsible for it.

Keywords: Liver, Natural, Plants, Extracts, Hepatotoxicity, Hepatoprotective

1. Introduction
Liver has three well-known properties to get involve in metabolism, have a high potential of regeneration and recovery from injury. The acute and severe cases of liver injury lead to life-threatening clinical syndromes including jaundice, severe coagulopathy, and increased rates of mortality. Still developing, medical tasks for elucidating the pathophysiological mechanisms and development of efficient therapy are going under consideration especially for severe hepatic injury [1]. Traditionally, various herbal medicine is studied to maintain the health, to prevent the disease condition and also proven for the cure of diseases. As the hepatotoxicity is very common in case of liver and can occur due to different causes which are studied before the management. Liver function tests should be performed for the proper diagnosis. In clinical practice, to recognize the hepatotoxicity, and for the preventive measures, steps are taken [2].

2. Monitoring of the symptoms
Symptoms like nausea, anorexia, malaise, fatigue, and right upper abdominal discomfort. Specific symptoms such as itching or jaundice should prompt consideration of hepatotoxicity while using the drug [3].

3. Considering a careful history
Clinical history of the patients should be checked along with the drugs being used, and a detailed history for the use of prescribed and non-prescribed over-the-counter herbal and other medications or remedies, with dates and amounts [4].

4. Drug-induced hepatic injury
If a drug gives allergic reaction during the therapy, it needs immediate withdrawal of suspected drugs. If in the use of allergy corticosteroids, which are not under controlled trial for efficacy, hence with that urodiol is given frequently for the cholestatic liver injury. But only N-acetyl cysteine is used for the acetaminophen poisoning. Liver transplanting was the final solution if coagulopathy or encephalopathy of liver is present [5].

5. Mechanisms of Liver damage
5.1) Increasing oxidative stress
Oxygen metabolism is the basic process for the liver functions and its mechanism. Alcohol toxicity may be associated with increased oxidative stress and free radical associated injury. Generation of oxygen metabolites such as superoxide (O_2^-) hydrogen peroxide (H_2O_2) and hydroxyl radicals (OH^-) are believed to be important in the

GSC Biological and Pharmaceutical Sciences, 2020, 11(01), 132–140

Available online at GSC Online Press Directory

GSC Biological and Pharmaceutical Sciences

e-ISSN: 2581-3250, CODEN (USA): GBPSC2

Journal homepage: https://www.gsconlinepress.com/journals/gscbps

(RESEARCH ARTICLE)

In silico screening and molecular docking of bioactive agents towards human coronavirus receptor

Pratyush Kumar *, Asnani Alpana, Chaple Dinesh and Bais Abhinav

Priyadarshini J. L. College of Pharmacy, Electronic Building, Electronic Zone, MIDC, Hingna Road, Nagpur-440016, Maharashtra, India.

Publication history: Received on 09 April 2020; revised on 13 April 2020; accepted on 15 April 2020

Article DOI: https://doi.org/10.30574/gscbps.2020.11.1.0099

Abstract

Coronavirus infection has turned into pandemic despite of efforts of efforts of countries like America, Italy, China, France etc. Currently India is also outraged by the virulent effect of coronavirus. Although World Health Organisation initially claimed to have all controls over the virus, till date infection has coasted several lives worldwide. Currently we do not have enough time for carrying out traditional approaches of drug discovery. Computer aided drug designing approaches are the best solution. The present study is completely dedicated to in silico approaches like virtual screening, molecular docking and molecular property calculation. The library of 15 bioactive molecules was built and virtual screening was carried towards the crystalline structure of human coronavirus (6nzk) which was downloaded from protein database. Pyrx virtual screening tool was used and results revealed that F14 showed best binding affinity. The best screened molecule was further allowed to dock with the target using Autodock vina software. The results of docking of F14 with target using autodock vina revealed the binding affinity of -10.6. The interaction study with discovery studio visualize revealed the molecular interaction with serine, histidine, asparagine, leucine, tyrosine, lysine, isoleucine, threonine. The molecular properties of F14 were also calculated. The study helped us understand that 3-amino-2-phenylquinazolin-4(3*H*)-one molecule can act as a potent parent structure for treating pandemic of coronavirus. This might be an essential tool for the medicinal chemist for designing novel molecule for treatment of coronavirus infection.

Keywords: Coronavirus; Virtual screening; Molecular docking; Autodock vina; Molinspiration

1. Introduction

Respiratory disorders are very common in country like India. The major reason for such disorders is pollution. The emissions from automobiles and several industries are degrading the quality of air. Currently the world is fighting against coronavirus disease [1].The origin of this virus is from china and has currently spread all over the world. COVID-19 is an infectious agent responsible for the disease. The coronavirus has entered the periphery of Indian borders through several migrants. The contagious and infectious nature of the virus has lead to spreading among several individuals [2].

People infected with the COVID-19 virus experiences mild to moderate respiratory illness, older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.

At this time, there are no specific vaccines or treatments for COVID-19. However, there are many ongoing clinical trials evaluating potential treatments. WHO will continue to provide updated information as soon as clinical findings become available [3].

* Corresponding author: Pratyush Kumar

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES
Charde *et al.* World Journal of Pharmacy and Pharmaceutical Sciences
SJIF Impact Factor 7.632
Volume 9, Issue 5, 448-462 Review Article ISSN 2278 – 4357

CURRENT UPDATES ON RECURRENT APHTHOUS STOMATITIS: ETIOLOGY, PATHOGENESIS AND MANAGEMENTS

Kirti D. Charde*, Kanchan P. Upadhye, Yogesh N. Gholse and Dinesh R. Chaple

Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur- 440016, India.

Article Received on
04 March. 2020,

Revised on 25 March 2020,
Accepted on 15 April 2020

DOI: 10.20959/wjpps20205-16050

***Corresponding Author**
Kirti D. Charde
Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur-440016, India.

ABSTRACT

"Aphthous" began from the Greek word "aphtha", the significance of which is ulcer Aphthous Stomatitis is one of most basic ulcerative illness related principally with the oral mucosa described by the incredibly agonizing, repeating single, various ulcers in the upper throat and oral pit. Intermittent Aphthous stomatitis is a delicate and regularly repetitive provocative procedure of the oral mucosa that can seem auxiliary to different all around characterized illness forms. The ulcers have been normally portrayed to ordinarily show up first in adolescence and will in general lessen around the third decade of life. Finding is on clinical grounds alone, and must be separated from other reason for repetitive ulceration, especially Behcet infection a foundational issue in which aphthous like ulcers are related with genital ulceration, and eye illness. The board stays inadmissible, as topical corticosteroids and most different medications just lessen the seriousness of the ulceration, yet don't stop repeat. There are a few treatment choices both neighborhood and foundational for the board of aphthous stomatitis. No single treatment has been seen as reliably solid in all patients with Recurrent Aphthous stomatitis, it might be basic to attempt a few sorts of meds for ideal reaction and avoidance of repeat. As dental clinicians and explores become better prepared in oral medication and stomatology, it is foreseen that the pathophysiology, anticipation and treatment of intermittent aphthous ulceration will improve later on.

KEYWORDS: Recurrent Aphthous stomatitis, Oral Cavity, Atiology, Pathogenesis, Management.

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES
Sahu *et al.* World Journal of Pharmacy and Pharmaceutical Sciences
SJIF Impact Factor 7.632
Volume 9, Issue 5, 217-236 Review Article ISSN 2278 – 4357

MICROSPONGE AS A NOVEL DRUG DELIVERY SYSTEM: A FUTURISTIC APPROACH

Shanu B. Sahu*, Kanchan P. Upadhye, Anup R. Thakre

Priyadarshini J. L. college of Pharmacy, Electronic Building, Electronic Zone, Hingna Road, Nagpur-440016.

Article Received on
07 March. 2020,

Revised on 28 March 2020,
Accepted on 18 April 2020

DOI: 10.20959/wjpps20205-16006

***Corresponding Author**
Shanu B. Sahu
Priyadarshini J. L. college of Pharmacy, Electronic Building, Electronic Zone, Hingna Road, Nagpur-440016.

ABSTRACT

Microsponge are polymeric drug delivery systems made out of permeable microspheres. They are little sponge like circular with an enormous permeable surface. The microsponge delivery system (MDS) is a unique innovation, for controlled release of topical specialists and comprises of macroporous beads, commonly 10-25µm in measurement, loaded with active agent. Microsponges discharges its active ingredients on period mode, when applied to the skin and furthermore in response to other stimuli(rubbing, pH, etc.). Conventional preparations have some disadvantages like unsavory smell, oiliness and skin aggravation. These problems are overcome by microsponge delivery system. Microsponge innovation is being utilized right now in makeup, over time counter (OTC) healthy skin cares, sunscreen and prescription products. Microsponge can give expanded viability to topical active agents with upgraded wellbeing, extended stability and improved aesthetic properties in an effective and novel way.

KEYWORDS: Microsponge, polymer-based, preparation, topical, oral, biopharmaceutical delivery.

INTRODUCTION

Now a day the biggest challenge faced by the pharmaceutical industry is to control the delivery rate of active pharmaceutical ingredient to a pre-determined site in human body. So the researchers are focused on designing different controlled release drug delivery systems to improve efficacy and patient compliance.[1]

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

Human Journals
Research Article
June 2020 Vol.:18, Issue:3

Fast Dissolving Sublingual Film of Rizatriptan Benzoate for Management of Migraine

IJPPR
INTERNATIONAL JOURNAL OF PHARMACY & PHARMACEUTICAL RESEARCH
HUMAN

Dhanashree Wasu*, Kanchan P. Upadhye, Akshata Sulbhewar

Department of Pharmaceutics, Priyadarshini J. L. College of Pharmacy, Electronic Zone, MIDC, Hingna Road, Nagpur-440016, Maharashtra, India.

Submission: 26 May 2020
Accepted: 02 June 2020
Published: 30 June 2020

HUMAN JOURNALS
www.ijppr.humanjournals.com

Keywords: Oral dosage form, Sublingual film, Rizatriptan, Gum Carrageenan, pectin

ABSTRACT

The present article explores the study about formulation and evaluation of fast dissolving sublingual film using natural polymer. Fast dissolving sublingual film of Rizatriptan Benzoate was prepared by the solvent casting method using different concentrations of polymers including Gum Carrageenan and pectin. The batches containing various concentration of drug and polymer were made. The study showed a significant rapid dissolution of fast dissolving sublingual film which disintegrates in 45 seconds where the optimized formulation A4 showed a disintegration time of 26 ± 0.20 seconds and % drug content of 98.01 ± 0.06. The study demonstrated that Gum Carrageenan can be used as a very good film-forming agent and used for fast dissolving film formulation.

Review Article

RECENT UPDATES ON ANTICANCER ACTIVITIES OF POMEGRANATE

Dhanashree Wasu* and Kanchan P. Upadhye

Department of Pharmaceutics, Priyadarshini J. L. College of Pharmacy,

Electronic Zone, MIDC, Hingna Road, Nagpur-440016, Maharashtra, India.

ABSTRACT

Natural and some synthetic compounds can prevent, suppress, or reverse the progression of cancer. Natural products have proven to be the most effective in terms of their ability to alter the function of proteins relevant to cancer. Pomegranate (*Punica granatum* L.) is considered as an ancient, mystical, unique known edible fruit borne on a small, long-living tree cultivated throughout the whole globe and is the symbolic of abundance and prosperity. For thousands of years, many cultures have believed that pomegranate have beneficiary effects on health, fertility, longevity and rebirth. The synergistic action of the pomegranate constituents appears to be superior to that of single constituents. In the past decade, numerous studies on the various properties of pomegranate constituents have been published, focusing on treatment and prevention of cancer, cardiovascular disease, diabetes, dental conditions, erectile dysfunction, bacterial infections and antibiotic resistance, and ultraviolet radiation-induced skin damage, infant brain ischemia, Alzheimer's disease, arthritis, and obesity. Present review article highlights current and updates on the use and application of pomegranate for prevention and treatment of various types of cancer.

Keywords: Anti-inflammatory activity, cancer, pomegranate, prevention.

INTRODUCTION

Pomegranate, *Punica granatum* L., an ancient, mystical and highly distinctive fruit, is the predominant member of two species comprising the Punicaceae family.[1] Pomegranate is a widely used plant having medicinal properties. It is a nutrient dense fruit rich in phytochemical compounds.[2] Pomegranate has been used for thousands of years to cure a wide range of diseases across different cultures and civilizations. It has great nutritional values and numerous health benefits. The pomegranate has been used in natural and holistic medicine to treat sore throats, coughs, urinary infections, digestive disorders, skin disorders, arthritis and to expel tapeworms. However, modern research suggests that pomegranates might be useful in treating such serious conditions as prostate cancer, skin cancer, osteoarthritis, and diabetes. Studies also show that pomegranate seeds might help get rid of the fats of the digestive system. Clinical research shows that pomegranates, when part of a healthy diet, might help prevent heart disease, heart attacks and strokes. This is because pomegranates have the potential to thin the blood, increase blood flow to the heart, reduce blood pressure, reduce plaque in the arteries, and reduce bad cholesterol while increasing good cholesterol. A decoction of seed is used to treat syphilis. Juice used to treat jaundice and diarrhoea. Juice of flower is used to treat nose bleeds. The fruit pulp and the seed are stomachic. Dried, pulverized flower buds are employed as a remedy for bronchitis.[3]

In preliminary laboratory research and clinical trials, juice of the pomegranate may be effective in reducing heart disease risk factors, including LDL oxidation, macrophage oxidative status and foam cell formation. In mice, "oxidation of LDL by peritoneal macrophages was reduced by up to 90% after pomegranate juice consumption. In December, 2010 scientists identified components in pomegranate juice that inhibit the movement of cancer cells. Researchers at the University of California found that these components also weaken cancer cells' attraction to a chemical signal that promotes the metastasis of prostate cancer to the bone and pomegranate juice helps fight prostate cancer.

In the ancient Ayurveda system of medicine, the pomegranate has extensively been used as a source of traditional remedies for thousands of years. The rind of the fruit and the bark of the pomegranate tree is used as a traditional remedy against diarrhoea, dysentery and intestinal parasites. The seeds and juice are considered a tonic for the heart, throat and eyes and for a variety of purposes, such as stopping nose bleeds and gum bleeds, toning skin, firming-up sagging breasts and treating haemorrhoids. In the past decade, numerous studies on the antioxidant, anti-carcinogenic and anti-inflammatory properties

Available online at www.jmpas.com ISSN NO. 2320 – 7418
JOURNAL OF MEDICAL PHARMACEUTICAL AND ALLIED SCIENCES

RESEARCH ARTICLE DOI: 10.22270/jmpas.v9i2.916

COMPARISON OF EVALUATION PARAMETERS OF DIFFERENT BRANDS OF MARKETED TOOTHPASTE

Charde kirti*, Upadhye Kanchan, Kawade Dinesh, Gholse Yogesh, Gajbhiye Pranali, Chaple Dinesh

Priyadarshini J. L. College of pharmacy, Nagpur, Maharastra, India

Correspondence
Kirti Charde*
Priyadarshini J. L. College of pharmacy, Nagpur, Maharastra, India
Electronic Zone Building, MIDC, Hingna Road, Nagpur- 440016
✉ kirticharde95@gmail.com

Keywords
Pharmacy Colgate Max fresh, Meswak, Dantkanti, Pepsodent, Closeup, Babool, Bureau of Indian standards

Received
01/05/2020
Reviewed
09/05/2020
Revised/ Accepted
14/05/2020

ABSTRACT
The fundamental point of the current work is to assess and look at changed brands Marketed toothpaste. All the advertised tooth glues which had been assessed conformed to the norms indicated by the Bureau of Indian Standards. The plans were exposed to different assessment tests like pH, Spreadability, abrasiveness, frothing capacity, cleaning capacity, fineness, dampness and unstable substance, tube inactivity test. The primary point of this examination work is to assess the normalization parameters of various brands of showcased toothpaste. To decide the security and viability of the various brands of toothpaste. Toothpaste having a stressed job in the keeping up the oral sterile nature just as forestalling dental caries. In view of this writing, a premium make to assess and contrast the six showcased toothpaste with get plan increasingly steady. In the current examination, six business toothpaste, for example, Colgate Maxfresh, Meswak, Dantkanti, Pepsodent, Closeup, and Babool have been assessed for their quality.

INTRODUCTION
Toothpastes have been utilized since the antiquated past and are one of fundamental imperative segments of oral human services. The structure of toothpaste plans started in China and India, as 300-500 BC. During that period, crushed bone, pounded egg and shellfish shells were used as abrasives as a piece of tooth cleaning.[1] Current toothpaste definitions were created in the nineteenth century. Later on, chalk and cleanser were fused to those definitions. After 1945, a few detailing progressions of various cleansers had started, sodium lauryl sulfate had been utilized as emulsifying specialist. As of late, the center has moved towards the arrival of dynamic fixings during detailing advancements to forestall and/or treat oral illness.[2]
Toothpaste is a dentifrice used to clean, keep up and improve the soundness of teeth. Toothpaste is primarily used to advance oral tidiness and furthermore goes about as a rough that assists with forestalling the dental plaque and nourishment particles from the teeth, helps in the evacuating as well as veiling of halitosis, and discharges dynamic fixings, for example, fluoride to help in forestalling tooth and gum infection (eg. Gum disease). Most of the cleaning is performed by the mechanical usage of the toothbrush with the assistance of excipients utilized in toothpaste. The primary point of this examination is to assess the Herbal toothpaste definitions and contrasting and three mainstream business toothpastes.[3]
Oral cleanliness is a significant key to keep up great appearance, impression of an individual and gives certainty. The tooth comprises of two sections, crown and the root. The crown of the tooth is secured by external surface called finish and it is the hardest tissue in the tooth. The significant creation of lacquer is hydroxyl apatite other than that it comprises of water and keratin. Dentine is the underneath part of the veneer, which is a composite of hydroxyl apatite. It additionally comprises of 70% of the collagen water. Fluorine is the significant segment of dentine.[4] Oral

Review Article

Hand Sanitizers: An Essential Commodity in A Busy Life

Kanchan Upadhye, Shweta Suresh Rajankar*
Department of Pharmaceutics, Priyadarshini J.L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur-440016 (Maharashtra), India.
***Corresponding author's E-mail:** rajankarshweta1234@gmail.com

Received: 10-02-2020; **Revised:** 15-04-2020; **Accepted:** 28-04-2020.

ABSTRACT

Nosocomial infection (NI) also known as hospital acquired infections, has increased attention due to the significant morbidity and mortality caused by NI worldwide. Transmission of NI is believed to occur predominantly via the mode of pathogen exchange to and from contaminated hands. Thus, maintaining clean and microbe free hands gains a lot of scientific and clinical scope. Hand sanitizer is for "hand hygiene". It is a vital principle in the prevention, control, and reduction of any acquired infection. Mainly hand sanitizer can stop the chain of transmission of micro-organisms and other bacteria from hand to different parts of our body. Hand hygiene is important and one of the most critical steps in food production, food service as well as in homes and other day care preparations. Hand sanitizer avoids adverse effects like itching, irritation, dermatitis etc. Hand sanitizer are even more important in places where there is not always going to be soap and water or at the office, in the classroom, or in any space with lots of foot traffic, germs spread quickly and other people's germs can affect you or when a health care worker has so many patients to attend to and does not have the time to wash the hands after attending to each patients. The present review was aimed to discuss the advantages, limitation and antibacterial efficacy of various hand sanitizer such as alcoholic, non- alcoholic and herbal sanitizer. The efficiency of a sanitizer depends on the concentration and grade of its active ingredient.

Keywords: Nosocomial infection, herbal hand sanitizer, herbal extract, hand hygiene, anti-microbial activity.

INTRODUCTION

Hands are primary mode of transmission of harmful germs and infections, hand hygiene is therefore the most important measure to avoid the transmission of microbes and prevent the infections. Hand hygiene is the single most important very simplest method and least expensive means of preventing nosocomial infections.[1] Contaminated hands can serve as vectors for the transmission of microorganisms. Pathogenic microorganisms accountable for outbreaks are spread from the hands of the food handler to others when the food handler contaminates his/her hands and then passes these microorganisms to consumers via hand contact with food or drinks. The consumer is exposed following the ingestion of these microorganisms, which may cause gastro intestinal illness.

Hand contact with ready-to-eat foods represents a very essential mechanism by which pathogens or microorganism may enter the food supply. Food handlers whose work involves touching unpacked foods to be consumed raw or without further cooking or other forms of dealing have been identified as a particular risk group.[2] To protect the skin from harmful micro-organisms and to prevent spreading of many contagious diseases, hand washing is absolutely an important precaution. Food production workers and foodservice personnel must be taught to use correct hand and fingertip washing by management in preparation for work.[3]

Figure 1: Gel hand sanitizer

(A person using gel hand sanitizer)

Any health-care worker or person involved in direct or indirect patient care needs to be concerned about hand cleanliness and should be able to perform it appropriately and at the right time.[4] Last time we checked, you cannot take a sink on the go in those situation where you need to wash your hands, there is not always going to be soap and water available. You can slip a small bottle of hand rub disinfectant in your glove compartment, a purse or even your pocket for situation where you might want to wash your hands but either cannot find a sink or waiting for one is inconvenient. It is perfect for when you are grabbing a snack at a sporting event or have just left a public space like the grocery store. At the office, in the classroom, or in any space with lots of foot traffic, germs spread quickly and even if you are not getting ready to eat or taking out the garbage, other people's germs can affect you. That is why

Review Article

A Review on Ion Exchange Resins as Drug Delivery System

Kiran D. Belsare *, Suparna S. Bakhle, Kanchan P. Upadhye, Gouri R. Dixit, Ninad A Mahakulkar
Pharmaceutics Department, Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur, India.
***Corresponding author's E-mail:** swetabelsare22@gmail.com

Received: 18-03-2020; **Revised:** 22-05-2020; **Accepted:** 28-05-2020.

ABSTRACT

Ion exchange resins (IER) are cross-linked water insoluble polymer carrying ionizable functional groups. Ion exchange resin have received attention from the pharmaceutical scientists because of their considerable properties as the drug delivery vehicles. The efficacy of ion exchange resins mainly depends upon their physical properties such as degree of exchange capacity, cross-linkage, ionization, porosity and swelling, particle size and form, purity, toxicity and equilibrium rate. Research over the last several years has revealed that Ion exchange resin are equivalently suitable for drug delivery technologies, including the controlled release, usually in transdermal, nasal, topical, oral and taste masking. The drawback of sustained release or extended release is dose dumping, resulting in increased risk of toxicity. The use of Ion exchange resin has an important place in the development of the controlled or sustained release systems because they have effective drug-retaining properties and the prevention of dose dumping. Synthetic ion exchange resins have been used in the pharmacy and medicine for taste masking or controlled release of drug. Drug resin complexation generally converts drug to amorphous form leading to improve the drug dissolution. Some of the system studies have reported the use of IER for drug delivery at the desired site of action. Sulfonated and carboxylic resins with a polystyrene backbone are generally used in clinical medicine. This review addresses various types of ion exchange resin, its properties as well as its applications.

Keywords: Ion exchange resin, taste masking, resin drug complex.

INTRODUCTION

Ion exchange resins (IER) are cross-linked, synthetic, high molecular weight, water insoluble polymers, usually white or yellowish, fabricated from the organic polymer having an ionizable functional group. Novel drug delivery systems are gaining momentum in the last two decades as they offer decrease frequency of dosing and patient compliance. One of the best techniques for modified drug delivery systems is the use of ion exchange resins (IER) as carriers for such systems [1].

IER are insoluble polymers which carry acidic or basic functional groups and that have the capability to exchange counter-ions within aqueous solutions surrounding them. An ion exchange resin is like a small bead with a diameter in between 1-2 mm. These are generally white or yellowish and it is fabricated from an organic polymer substrate backbone [2.] Ion exchange is a reversible process in which ions of like sign are exchanged in between liquid and solid when in contact with the highly insoluble body [3]. The drug is released from the resinate by exchanging with ions in the gastrointestinal fluid followed by drug diffusion [4.] Due to the appearance of high molecular weight water insoluble polymers, the resins are not absorbed by the body and are therefore inert. The effectiveness of ion exchange resins mainly depends upon their physical properties such as degree of exchange capacity, cross-linkage, ionization, porosity and swelling, particle size and form, purity and toxicity, equilibrium rate. Drug resinates are usually formulated with purified resins and drugs [5,6.]

Research over the past some years has revealed that the IER are equivalently suitable for delivery technologies, together with controlled release, transdermal, nasal, topical, oral and taste masking. Synthetic ion exchange resins have been used in pharmacy and medicine for masking the taste of the drug or controlled release of drug as early as 1950. Ion-exchange systems are beneficial for drugs that are highly susceptible to degradation by enzymatic process. An important advantage of this ion exchange system is the low running cost [7,8.]

Advantages

- Economic and readily available.
- Free from local and systemic toxicities.
- Drug-resinates can be formulated into various dosage forms like tablets, capsules, suspensions etc.
- Can be used for several purposes such as taste masking, sustained and rapid release.
- Effectively useful in low concentration (5-20%w/w).
- Need for less dosing
- Resins have high drug loading [9.]

Clinical Advantages

- Reduction in frequency of drug administration
- Improved patient compliance

WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 9, Issue 6, 2200-2220. Research Article ISSN 2277– 7105

ROLE OF TOCOPHEROL IN THE PREVENTION AND TREATMENT OF VARIOUS DISORDERS

Gulkari V. D.* and Lakhe D. B.

Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur.

Article Received on
18 April 2020,

Revised on 08 May 2020,
Accepted on 28 May 2020

DOI: 10.20959/wjpr20206-17733

***Corresponding Author**
Dr. Gulkari V. D.
Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur.

ABSTRACTS

The "Vitamin E" was genuinely gotten from a blend word made up by Polish specialist Casimir Funk from goal and amine, which implies amine of life. Vitamin E is the noteworthy lipid-dissolvable malignant growth anticipation specialist in the cell support system and is exclusively gained from the eating schedule. Vitamin E guarantees polyunsaturated unsaturated fats and various portions of cell movies and low-thickness lipoproteins from oxidation by free radicals. It is found fundamentally inside the phospholipid bilayer of cell layers. Different wellsprings of supplement E are nut species around the globe, the almond pieces were the fundamental. Supplement E is ingested into the lymphatic system from the stomach related organs and enters the blood as a fragment of the chylomicrons. The majority of supplement E in plasma is in the low-thickness lipoproteins. Alpha-tocopherol is the huge tocopherol in grown-up plasma and records for around 87% of the all tocopherols center. Vitamin E levels in plasma run from 0.5-mg/dl in regular masses. The diverse pharmacological utilities of Vitamin E are cell reinforcement, insusceptible, anticancer and hostile to provocative development. The diverse evaluation parameters agreeing the WHO and Pharmacopoeial Index are summed up in this overview.

KEYWORDS: Tocopherol, Alpha Tocopherol, Vitamin E.

1. INTRODUCTION

Tocopherol is a natural compound required as a supplement in little sums by a creature. At the end of the day, a natural substance compound (or related arrangement of mixes) is known as a Tocopherol. At the point when it can't be incorporated in adequate amounts by a living

World Journal of Pharmaceutical Sciences
ISSN (Print): 2321-3310; ISSN (Online): 2321-3086
Available online at: http://www.wjpsonline.org/
Original Article

Pharmacognostic studies of leaves, roots, stem, and fruits of *Uraria picta*

Dr. Vijay D. Gulkari[1], Vidya S. Kukde[2]

Priyadarshini J L College of Pharmacy, Electronic Zone Building, Nagpur, India

Received: 30-04-2020 / Revised Accepted: 21-05-2020 / Published: 31-05-2020

ABSTRACT

This study presents the detailed Macro and microscopical evaluation of leaves of crude drug *Uraria picta* belonging to family Leguminosae, Papilionaceae. The study was help to identify and establish the authenticity of *Uraria picta.* The parameters also help to standardize the crude drug and minimize the drug adulteration. The quality control parameters for the crude drugs as raw materials were established with the help of several official determinations based on morphology and microscopy studies. These studies were aimed at ensuring standardization of herbal drug under investigation. Morphological examination of drugs refers to evaluation of drugs by colour, odour, taste, size, shape and special features, like touch, texture etc. All these parameters were recorded for leaves, root, stem, fruit and seed of the plant *Uraria picta.* These were helpful in primary identification of *Uraria picta.* Paracytic type stomata and curve apex covering trichomes, a dense reticulate venation pattern, spongy mesophyll are the differential character, Calcium oxalate crystals of prismatic and rhomboidal shape, types are fairly abundant in the leaf which is the identification characters.

Keywords: *Uraria picta*, Prishnaparni, Herbal drugs, Microscopy, Macroscopy

Address for Correspondence: Dr. V. D. Gulkari, Associate Professor, Priyadarshini J L College of Pharmacy Electronic Zone Building Nagpur, India; Mail: **vijaygulkari@gmail.com**

How to Cite this Article: Dr. Vijay D. Gulkari, Vidya S. Kukde. Pharmacognostic studies of leaves, roots, stem, and fruits of *Uraria picta*. World J Pharm Sci 2020; 8(6): 82-95.

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES
Syed *et al.* World Journal of Pharmacy and Pharmaceutical Sciences
SJIF Impact Factor 7.632
Volume 9, Issue 4, 407-411 Review Article ISSN 2278 – 4357

CARBOHYDRATE POLYMERS: BEYOND THE TITLE.

Fariha Afsar Ali Syed* and Dr. Vijay Gulkari

Priyadarshini J. L. College of Pharmacy, Nagpur. 440016.

Article Received on
31 Jan. 2020,

Revised on 20 Feb. 2020,
Accepted on 11 March 2020

DOI: 10.20959/wjpps20204-15874

***Corresponding Author**
Fariha Afsar Ali Syed
Priyadarshini J. L. College of Pharmacy, Nagpur. 440016.

ABSTRACT

Starch is the main carbohydrate in plants & important role in nutrition. The awareness about effects the use of harmful raw material & their associated toxicity to the environment. The polymers of carbohydrate like starch and cellulose gives unique opportunity to explore raw material. Application of carbohydrate polymers in industrial processes such as adsorption, fuel cell etc.

KEYWORDS: Carbohydrate polymers, adsorption, fuel cells.

1) INTRODUCTION

Carbohydrates are Poly-hydroxylated aldehydes or ketones and their derivatives (Khowala *et al.*, 2008). In nature carbohydrates are the most abundant and diverse class of organic compounds (Steve., 2005). These are the main source of energy that is ingested by the human body (Asif *et al.*, 2011). Carbohydrates are linked with amino acid polymers these are proteins forming glycoproteins and with lipids are glycolipids (Khowala *et al.*, 2008). During the process of photosynthesis carbohydrates are produced: (Steve., 2005).

$$6CO_2 + 6H_2O \longrightarrow C_6H_{12}O_6 + 6O_2$$

In food carbohydrates, starch is in a unique position. Starch plays major part in providing the metabolic energy to do the different functions of body (Steve., 2005). Carbohydrates are classified into four types these are: Mono-saccharides, Di-saccharides, Oligo-saccharides and Poly-saccharides (Table.1) Mono-saccharides cannot be hydrolyzed into simple sugars. Di-saccharides gives two mono-saccharides by hydrolysis and and poly-saccharides may be the Homo-polysaccharides or Hetero-polysaccharides (Asif *et al.*, 2011).

Journal of Medical Pharmaceutical And Allied Sciences

www.jmpas.com
ISSN 2320-7418

REVIEW ARTICLE

A COMPREHENSIVE UPDATED REVIEW ON GINGIVAL CREVICULAR FLUID: CHARACTERISTICS, COLLECTION AND ESTIMATION

Gajbhiye Pranali*, Gholse Yogesh, Kasliwal Rahul, Thakre Anup

Priyadarshini J. L. College of Pharmacy, Nagpur, Maharastra, India

Correspondence
Pranali Gajbhiye*
Priyadarshini J. L. College of Pharmacy, Electronic Zone Building Hingna Road, Nagpur, Maharastra, India, 440016.
✉ pranaligajbhiye21@gmail.com

Keywords
Gingival crevicular fluid, Periodontitis, Sampling techniques, Estimation of GCF

Received
16/04/2020

Reviewed
20/04/2020

Revised/ Accepted
22/04/2020

ABSTRACT

Gingival crevicular fluid is an exudate released by the gums that can be found in the split arranged at where the gum line meets the teeth. The centralizations of this fluid are commonly low, anyway during aggravation the GCF stream augmentations and its amalgamation starts to take after that of a provocative exudate. It has an exceptional influence in keeping up the structure of junctional epithelium and the antimicrobial barrier of periodontium. A portion of the speculated periodontal pathogen, for example, *Porphyromonasgingivalis* and *Treponemadenticola* produce wide range nonpartisan proteinases as a major aspect of their harmfulness weapons store. These proteinases might be distinguished in plaque and gingival crevicular liquid examples of patients with periodontitis. the liquid part of gingival crevicular liquid is gotten essentially from microvascular spillage. There are particular favourable circumstances and difficulties of utilizing gingival crevicular liquid as an indicative test for periodontal ailment. Because of confinements in its assortment, which incorporates volume size and defilement, gathering strategies need further work. This article targets looking into quickly about the GCF and its job as a symptomatic marker in periodontal sickness. The essential point of the present examination was to research contrasts between gingival crevicular liquid inspecting procedures in particular assortment by Absorbent filter paper strips, micropipettes or capillary tubing technique, pre-weighed twisted thread, crevicular washing technique, and Curette collection technique.

.

Available online at www.jmpas.com
JOURNAL OF MEDICAL PHARMACEUTICAL AND ALLIED SCIENCES
ISSN: 2320-7418
REVIEW ARTICLE DOI- 10.22270/jmpas.v9i1.904

CURRENT UPDATES ON NATURAL SUPERDISINTEGRANTS IN THE DEVELOPMENT OF FAST DISSOLVING TABLETS

Kamde Karishma Kasliwal Rahul, Gholse Yogesh, Chaple Dinesh

Priyadarshini J. L. College of Pharmacy, Nagpur, Maharashtra, India

Correspondence
Karishma Kamade*
Priyadarshini J. L. College of Pharmacy, Electronic Zone Building Hingna Road, Nagpur, Maharastra, India, 440016.
✉ karishmakamde035@gmail.com

Keywords
Superdisintegrants, Natural super disintegrant, fast dissolving tablet, Synthetic super disintegrant, Disintegration, Swelling.

Received
13/04/2020
Reviewed
17/04/2020
Revised/ Accepted
20/04/2020

ABSTRACT

Superdisintegrants are a rising example in the Pharmaceutical field. In the application oral separating tablets (ODTs), snappy dispersible tablets, holders, mouth-dissolving films superdisintegrants have seen as a noteworthy nearness especially for ODTs and fast dispersible tablets. Usage of customary superdisintegrants in the improvement of orally stalling tablets has different focal points, for instance, artificially lethargic, non-harmful, progressively reasonable, biodegradable and extensively available. Distinctive ordinary superdisintegrants utilized in the improvement of orally separating tablets have in like manner been discussed. Today, the whole world is continuously interested by trademark meds and excipients. These normal materials have advantage over fabricated ones since they are artificially inert, nontoxic, increasingly moderate, biodegradable and for the most part available. In this way these plans consistently accomplished a superior patient consistence in the event of Pediatric, Geriatric or Psychiatric patients experiencing Dysphagia as Dysphagia has grown to be a disturbing concern everywhere throughout the Globe. Right now, accentuation is given on various kinds of superdisintegrants utilized in mouth dissolving tablets, their components and applications. Manufactured crumbling specialists are accessible as a profoundly prudent and less compelling when contrasted with normal breaking down operators. Thusly regular disintegrants fill in as the best choice to beat the issues of these engineered substances. Because of their various focal points over manufactured items they are broadly utilized in the pharmaceutical field as a cover, disintegrants, gums, and adhesives.

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES
Bisane *et al.* World Journal of Pharmacy and Pharmaceutical Sciences
SJIF Impact Factor 7.632
Volume 9, Issue 6, 698-718 Review Article ISSN 2278 – 4357

A REVIEW ON ORAL CONTROLLED DRUG DELIVERY SYSTEM: A MODERN FORMULATION APPROACH

Kajal L. Bisane*, Rahul H. Kasliwal, Yogesh N. Gholse, Pranali R. Gajbhiye, Karishma D. Kamde and Dinesh R. Chaple

Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur-440016, India.

Article Received on
08 April 2020,

Revised on 29 April 2020,
Accepted on 30 May 2020

DOI: 10.20959/wjpps20206-16337

***Corresponding Author**
Kajal L. Bisane
Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur-440016, India.

ABSTRACT

Controlled-release (CR) formulations have been introduced into drug therapy with two main purposes, to reduce the number of single dose per day improving patient compliance of treatment and to decrease the fluctuations of plasma levels, in order to obtain better therapeutic efficacy and lower toxicity. The basic goal of therapy is to achieve a steady state blood level that is therapeutically effective and non-toxic for an extended period of time. The design of proper dosage regimens is an important element in accomplishing this goal. Controlled release, extended action, timed release, depot and respiratory dosage forms are terms used to identify drug delivery systems that are designed to achieve a prolonged therapeutic effect by continuously releasing medication over an extended period of time after administration of single dose. In the case of orally administered dosage forms, the period is measured in hours and critically depends on the residence time of the dosage form in the gastrointestinal tract. Controlled release also denoted systems which can provide some control whether this is of a temporal or spatial nature or both for drug release in the body. The system attempts to control drug concentrations in the target tissues or cells. Prolonged or sustained release systems only prolonged therapeutic blood or tissue levels of the drug for an extended period of time.

KEYWORDS: Oral controlled release drug delivery system, matrix system, factors influencing oral CRDDS, Current and future development.

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES
Kamde *et al.* World Journal of Pharmacy and Pharmaceutical Sciences
SJIF Impact Factor 7.632
Volume 9, Issue 5, 356-368 Review Article ISSN 2278 – 4357

RECENT TRENDS OF POLYMER USAGE IN THE FORMULATION OF ORODISPERSIBLE TABLETS

Karishma D. Kamde*, Rahul H. Kasliwal, Yogesh N. Gholse, Dinesh R. Chaple

Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur-440016, India.

Article Received on
04 March 2020,

Revised on 25 March 2020,
Accepted on 15 April 2020

DOI: 10.20959/wjpps20205-16042

***Corresponding Author**
Karishma D. Kamde
Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur-440016, India.

ABSTRACT

Orally separating tablets have eliminated a tremendous position among the oral drug movement systems inferable from their improved patient consistence especially in the geriatrics and pediatrics. These tablets offer different liberal good conditions over standard portion structures by virtue of improved feasibility, bioavailability and quick start of movement. The oral course is the most advantageous course for organization of strong measurements structure, about 85% of strong dose directed by oral course on account of favorable circumstances over others. Superdisintegrants are used to improve the practicality of solid estimation structures. This is practiced by decreasing the separating time which accordingly improves sedate deterioration rate. Disintegrants are substances or mix of substances incorporated the drug definition that supports the partition or disintegrating of tablet or compartment content into more diminutive particles that separate more rapidly than without disintegrants. Superdisintegrants are generally used at a low level in the solid portion structure, commonly 1-10 % by weight near with the hard and fast weight of the estimation unit. The present examination incorporates the various sorts of disintegrants and superdisintegrants, which are being used in the specifying to give the more secure, convincing prescription transport with patient's consistence. Ongoing pattern toward the utilization of plant based and characteristic items requests the supplanting of manufactured added substances with common ones.

KEYWORDS: Orally disintegrating tablets, Superdisintegrants, Disintegration, Orodispersible tablets, Natural Superdisintegrant, Mucilage.

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES
Gajbhiye *et al.* World Journal of Pharmacy and Pharmaceutical Sciences
SJIF Impact Factor 7.632
Volume 9, Issue 5, 1227-1245 Research Article ISSN 2278 – 4357

CURRENT UPDATES ON BIOCHEMICAL IDENTIFICATION METHODS OF GINGIVAL CREVICULAR FLUID MICROFLORA OF SEVERE PERIDONTITIS PATIENT

Pranali R. Gajbhiye*, Yogesh N. Gholse, Rahul H. Kasliwal and Dinesh R. Chaple

Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur-440016, India.

Article Received on
04 March. 2020,

Revised on 25 March 2020,
Accepted on 15 April 2020

DOI: 10.20959/wjpps20205-16056

***Corresponding Author**
Pranali R. Gajbhiye
Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur-440016, India.

ABSTRACT

Bacteria are meant to be omnipresent and are mostly involved in lots of human microbial infections. Such bacterial infections can be identified by the different properties of this microorganism. Bacteria are bearing several inherent properties. By using these properties we can differentiate, can check there presence and absence, can check their gram negative and gram positive nature and many more. The present review is therefore focused to combine different biochemical test in one article. The identification of unknown bacteria produces benefits for many aspects of the research of microorganisms and helps physicians correctly treat patients. Multiple biochemical tests were performed to provide the fermentation abilities, presence of certain enzymes, and certain biochemical reactions. Qualitative observations were made on the tests, which were compared to unknown bacteria identification key to aid with the identification process. The identification is required so as to cure the illness or the infection caused due to the bacteria by using appropriate antibiotics. Identificationalso holds significance for epidemiological purposes.

KEYWORDS: Bacteria, biochemical test, micro-organisms, bacterial identification.

INTRODUCTION

Bacteria are present in most habitats on Earth, growing in soil, acidic, radioactive waste,[1] and deep in the Earth's crust, as well as in organic matter and the live bodies of plants and animals, providing outstanding examples of mutualism in the digestive tracts of humans,

Review Article

COVID-19: Recent Updates on its Mechanism and Treatment

Pranali R. Gajbhiye*, Yogesh N. Gholse, Rahul H. Kasliwal, Karishma D. Kamde, Kajal L. Bisane, Dinesh R. Chaple
Priyadarshini J. L. College of Pharmacy, Electronic Zone Building, MIDC, Hingna Road, Nagpur-440016, Maharashtra, India.
***Corresponding author's E-mail:** pranaligajbhiye21@gmail.com

Received: 10-03-2020; **Revised:** 20-05-2020; **Accepted:** 26-05-2020.

ABSTRACT

Toward the finish of 2019 a novel infection, serious intense respiratory condition coronavirus 2 (SARS-CoV-2), causing extreme intense respiratory disorder extended all inclusive from Wuhan, China. In March 2020 the World Health Organization announced the SARS-Cov-2 infection a worldwide pandemic. We played out an account audit to depict existing writing with respect to Coronavirus Disease 2019 (COVID-19) the study of disease transmission, pathophysiology, finding, the executives and future point of view. MEDLINE, EMBASE and Scopus databases were scanned for important articles. Albeit just when the pandemic finishes it will be conceivable to evaluate the full wellbeing, social and financial effect of this worldwide fiasco, this survey speaks to an image of the present best in class. Specifically, we center around general wellbeing sway, pathophysiology and clinical appearances, analysis, case the executives, crisis reaction and readiness. This audit expects to sum up early findings on the study of disease transmission, clinical highlights, analysis, treatment, the executives, and anticipation of COVID-19.

Keywords: COVID-19, epidemiology, mechanism and treatment, prevention.

INTRODUCTION

In mid 2020, another infection started creating features everywhere throughout the world in view of the remarkable speed of its transmission. From its starting points in a nourishment advertise in Wuhan, China, in December 2019 to nations as distant the United States and the Philippines, the infection (authoritatively named SARS-CoV-2) has influenced several thousands, with a rising loss of life now more than 17,000. The ailment brought about by a contamination with SARS-CoV-2 is called COVID-19, which represents coronavirus infection 2019.

Figure 1: COVID-19

Coronavirus (CoV) is a huge group of positive-sense, single-abandoned RNA infections that have a place with the Nidovirales request. The request incorporates Roniviridae, Arteriviridae, and Coronaviridae families. The Coronaviridae family is partitioned into Torovirinae and Coronavirinae subfamilies. Coronavirinae is further sub arranged into alpha-, beta-, gamma-, and delta COVs.[1] Phylogenetic grouping represents the characterization of these subtypes of infections. Their viral RNA genome ranges from 26 to 32 kilo bases long. They can be detached from various creature species. These incorporate feathered creatures, domesticated animals, and warm blooded creatures, for example, camels, bats, veiled palm civets, mice, hounds, and cats.[2] The across the board appropriation and infectivity of COV make it a significant pathogen.

An infection has a characteristic and zoonotic starting point: two situations that can conceivably clarify the cause of SARS-CoV2 are: (I) common choice in a creature have before zoonotic exchange; and (ii) regular determination in people following zoonotic transfer.[3] Clinical highlights and hazard factors are profoundly factor, making the clinical seriousness go from asymptomatic to fatal.[4] Comprehension of COVID-19 is on-going.

This audit expects to sum up early findings on the study of disease transmission, clinical highlights, analysis, treatment, the executives, and anticipation of COVID-19.

Pathophysiology and Clinical Manifestation

To address the pathogenetic components of SARS-CoV-2, its viral structure and genome must be thought of. Coronaviruses are encompassed positive strand RNA infections with the biggest known RNA genomes—30–32 kb—with a 50-top structure and 30-poly-A tail. Beginning from the viral RNA, the union of polyprotein 1a/1ab (pp1a/pp1ab) in the host is realized.[5] The interpretation works through the replication-translation complex (RCT) composed in twofold film vesicles and by means of the combination of subgenomic RNAs (sgRNAs) arrangements. Of note, translation end happens at

GSC Biological and Pharmaceutical Sciences
An International, Peer reviewed, Open access, Journal
Rapid Easy and High Quality Publication
e-ISSN: 2581-3250

HOME / ARCHIVES / VOL. 11 NO. 1 (2020): APRIL 2020 / Original Article

IN SILICO STUDIES OF PYRANO [2, 3-C] PYRAZOLES DERIVATIVES AS CYCLOOXYGENASE-2 INHIBITIORS

G ABHINAV BAIS
Priyadarshini J. L. College of Pharmacy, Electronic zone, Electronic building, Hingna Road, Nagpur-440016, Maharashtra, India.

R DINESH CHAPLE
Priyadarshini J. L. College of Pharmacy, Electronic zone, Electronic building, Hingna Road, Nagpur-440016, Maharashtra, India.

J ALPANA ASNANI
Priyadarshini J. L. College of Pharmacy, Electronic zone, Electronic building, Hingna Road, Nagpur-440016, Maharashtra, India.

PRATYUSH KUMAR
Priyadarshini J. L. College of Pharmacy, Electronic zone, Electronic building, Hingna Road, Nagpur-440016, Maharashtra, India.

SHRIKANT MOHURLE
Priyadarshini J. L. College of Pharmacy, Electronic zone, Electronic building, Hingna Road, Nagpur-440016, Maharashtra, India.

DOI: https://doi.org/10.30574/gscbps.2020.11.1.0098

Keywords: NSAID's, Cyclooxygenase-2 inhibitor, Pyrx software, Autodock software

ABSTRACT

Non-steroidal anti-inflammatory drugs (NSAID's) have been used widely from several decades for treatment of analgesia and inflammation. The most widely reported side effect of NSAID's is inflammation of gastric regions, ulceration and kidney problems. These side effects are due to non-selective inhibition of cyclooxygenase-2 over cyclooxygenase-1.Therefore we planned to design a potent cyclooxygenase-2 inhibitor using insilico techniques which may be used as anti-inflammatory and analgesics. In this current study we have chosen Pyrano[2,3-c] pyrazoles as the parent moiety along with several derivatives. These will acts as ligand molecules for computational protocols. The crystalline structure of cyclooxygenase-2 was downloaded from protein database and the pdb code was 1cx2. This will act as target for computational studies. Pyrx software was used for virtual screening of library of derivatives. The molecular docking of potent derivatives were carried using autodock software X:Y:Z (50:26:40). Other insilico properties were calculated using Molinspiration online property calculator, Protox II for structural property calculation and acute oral toxicity determination respectively. Derivatization in the molecule is must for increasing biological potential of parent moiety. The study revealed best molecule that was having potent analgesic and anti-inflammatory activity. Results revealed though the

GSC Biological and Pharmaceutical Sciences

An International, Peer reviewed, Open access Journal devoted to
Rapid, Easy and High Quality Publication

In-silico screening and molecular docking of bioactive agents towards human coronavirusceptor

Pratyush Kumar *, Asnani Alpana, Chaple Dinesh and Bais Abhinav

Priyadarshini J. L. College of Pharmacy, Electronic Building, Electronic Zone, MIDC, Hingna Road, Nagpur-440016, Maharashtra,India.

search Article

SC Biological and Pharmaceutical Sciences, 2020, 11(01), 132-140.
ticle DOI: 10.30574/gscbps.2020.11.1.0099
OI url: https://doi.org/10.30574/gscbps.2020.11.1.0099
blication history: Received on 09 April 2020; revised on 13 April 2020; accepted on 15 April 2020

bstract:
oronavirus infection has turned into pandemic despite of efforts of efforts of countries like America, Italy, China, ance etc. Currently India is also outraged by the virulent effect of coronavirus. Although World Health rganisation initially claimed to have all controls over the virus, till date infection has coasted several lives orldwide. Currently we do not have enough time for carrying out traditional approaches of drug discovery. omputer aided drug designing approaches are the best solution. The present study is completely dedicated to in lico approaches like virtual screening, molecular docking and molecular property calculation. The library of 15 oactive molecules was built and virtual screening was carried towards the crystalline structure of human ronavirus(6nzk) which was downloaded from protein database. Pyrx virtual screening tool was used and results vealed that F14 showed best binding affinity. The best screened molecule was further allowed to dock with the rget using Autodock vina software. The results of docking of F14 with target using autodock vina revealed the nding affinity of -10.6. The interaction study with discovery studio visualize revealed the molecular interaction ith serine, histidine, asparagine, leucine, tyrosine, lysine, isoleucine, threonine. The molecular properties of F14 ere also calculated. The study helped us understand that 3-amino-2-phenylquinazolin-4(3H)-one molecule can t as a potent parent structure for treating pandemic of coronavirus. This might be an essential tool for the edicinal chemist for designing novel molecule for treatment of coronavirus infection.

eywords: Coronavirus; Virtual screening; Molecular docking; Autodock vina; Molinspiration

ull text article in PDF: Click here

Share this

Important Links

Journal Indexing
Author's Guidelines
Past Issues
Submit Article
Track manuscript
Subscribe us

Journal Information

ISSN: 2581-3250
CODEN (USA): GBPSC2
CrossRef DOI: 10.30574/gscbps
Index Copernicus Indexed
Cosmos Impact factor: 6.25
General Impact factor: 3.85

Publication Certificate

Enter Email

Artice Number

Submit

Submit manuscript at

editor-gscbps@gsconlinepress.com

GSC Biological and Pharmaceutical Sciences, 2020, 11(02), 215–225

Available online at GSC Online Press Directory

GSC Biological and Pharmaceutical Sciences

e-ISSN: 2581-3250, CODEN (USA): GBPSC2

Journal homepage: https://www.gsconlinepress.com/journals/gscbps

(REVIEW ARTICLE)

Review on synthetic study of benzotriazole

Avhad Datta *, Asnani Alpana, Mohurle Shrikant, Kumar Pratyush, Bais Abhibnav and Tale Ruchita

Department of Pharmaceutical Chemistry, Priyadarshini J. L. College of Pharmacy, Nagpur-440016, (Maharashtra), (India).

Publication history: Received on 11 May 2020; revised on 20 May 2020; accepted on 22 May 2020

Article DOI: https://doi.org/10.30574/gscbps.2020.11.2.0137

Abstract

Benzotriazole is nitrogen containing heterocycle derivative containing three nitrogen atoms at 1st, 2nd, 3 rd positions. Lone pairs of each nitrogen atom are present in unshared form. The unshared lone pair of electrons enables five-membered ring to exhibit that can exist in tautomeric forms. Benzotriazole belongs to a fused heterocycles, which has a benzene ring fused with with a traizole ring. Benzotriazole and its derivatives have great significance in medicinal chemistry. The derivatives are used by several chemists for therapeutic conditions. The current paper concise several synthetic methods utilized for synthesizing derivativeswhich acts as antimicrobials, antibacterial, antifungal, antiviral, antitubercular, anticancer, anti-inflammatory, anticonvulsant, analgesic and antioxidant agents. The article will also help the researchers to understand the structure activity relationships and improvise the conceptsin their researches.

Keywords: Benzotriazole; Antimicrobial; Anticancer; Antifungal; Fused heterocycles

1. Introduction

As the micro-organisms are rapidly undergoing genetic changes and developing resistance against many antibiotics and therapeutic agents for various diseases more quickly than new drugs are being made available so the war against the infectious diseases has become a never ending process. Over the past few decades, there are great interest of triazole class arising due to their wide use in industry and agriculture. Benzotriazole and its derivatives have great significance in medicinal chemistry [1].

The incorporation of the Benzotriazole nuclei is an important synthetic strategy in drug discovery. The high therapeutic properties of the related drugs have encouraged the medicinal chemists to synthesize the large number of novel chemotherapeutic agents [2].

In general, nitrogen and sulfur containing organic compounds and their metal complexes display a wide range of biological activity as antitumor, antibacterial, antifungal and antiviral agents [3]. Benzotriazoles are often used as corrosion inhibitors, radioprotectors, and photo stabilizer in the production of plastic, rubber and chemical fiber 3. Along with these activities, benzotriazole is also important as a precursor in the synthesis of peptides, acid azides, preparation of 3hydroxymethyl-2,3-dihydrobenzofurans and 3-hydroxymethylbenzofurans [4].

N-Substituted benzotriazoles exist as two isomers: 1H- and 2H-substituted. It is generally agreed that 1H-substituted dominated in solid and solution, whereas the proportion of the 2H-tautomer increased in the gas phase [5]. However, the energy difference between the two isomers is very little [6]. Similarly, benzotriazoles containing Mannich bases have recently been synthesized also by amine exchange reactions, from the N,N-dimethylaminopropiophenone hydrochlorides and benzotriazole, respectively [7].

* Corresponding author: Avhad Datta

Article PDF Available

SYNTHESIS AND EVALUATION OF MUTUAL PRODRUGS OF IBUPROFEN AS NON STEROIDAL ANTI-INFLAMMATORY DRUGS WITH ANTIOXIDANTS

May 2020
DOI:10.20959/wjpps20205-16118

Authors:

Datta M Avhad

Dinesh Ramkrushnarao Chaple
Priyadarshni J. L. college of Pharmacy, Nagpur, Maharashtra

Alpana Asnani
Priyadarshini J. L. College of Pharmacy

Shrika Mohur

Show all 6 authors

Abstract

Mutual prodrug are form of prodrug in which two pharmacologically active compounds are in such a manner that one drug acts as carrier for each other. Inflammation is usually defined as the series of changes that occur in living tissues following by injury and is associated with redness, itching and swelling. Non-Steroidal Anti-inflammatory Drugs (NSAIDs) are commonly used for treatment of the inflammation. These drugs are used alone or in combination with other drugs. These drugs are associated major side effects like gastro intestinal irritation due to presence of carboxylic acid group in the structure. The local generation of various "reactive oxygen species" play a significant role in the formation of gastric ulceration associated with NSAIDs therapy. This indicates antioxidants may prevent gastric ulceration due to NSAIDs. Mutual prodrugs of Ibuprofen were planned for treatment of inflammation along with antioxidants property. Ibuprofen as mutual prodrugs and their physiological characterization of synthesized products were carried out Analgesic, anti-inflammatory and ulcerogenic activities were evaluated for synthesized compounds. The synergistic property of mutual prodrugs leads to potent biological actions i.e. treatment of inflammation.

Available online at www.jmpas.com ISSN NO. 2320 – 7418
JOURNAL OF MEDICAL PHARMACEUTICAL AND ALLIED SCIENCES

REVIEW ARTICLE DOI: 10.22270/jmpas.v9i2.912

AN OVERVIEW STUDY ON NASAL AND INTRANASAL DELIVERY SYSTEM OF DRUG

Barethiya Varsha*, Kukde Abhijeet, Rajbhar Kusum, Dixit Gouri

Priyadarshini J.L. College of Pharmacy, Nagpur, Maharashtra, India

Correspondence
Versha Barethiya*
Priyadharisini J.L. College of Pharmacy, Electronic zone building, M.I.D.C area, Nagpur, Maharashtra, India
✉ **varshabarethiya@gmail.com**

Keywords
Nasal cavity, retention time, mucociliary clearance, CNS disorders, antihistamines

Received
30/04/2020
Reviewed
10/05/2020
Revised/ Accepted
20/05/2020

ABSTRACT

Researchers and scientists make an incredible attempt to deliver the active medicaments in the various dosage forms for getting an effective therapeutic action. Several routes for drug administration are available presently with their promising effects and acceptance by the patients. Among this various drug delivery systems, nasal and intranasal route of drug delivery is found to be more promising as it is minimizing the shortcomings of oral and parenteral route. It is the only drug delivery systems which delivered the active medicament to the brain. It is found more valuable to treat the brain related disorders by administering the drug through the intranasal route. Hence, this delivery system is having a large surface area and found effective at low concentration of drug doses with the ease of drug administration, convenient and better patient compliance.

INTRODUCTION

In the current scenario, there are a several sort of dosage forms are available in the market for the administration of the pharmaceutical products to urge a faster therapeutic effectiveness. Each and every dosage form is having a plenty of advantages and that they are found to be more effective to deliver drug and complete their therapeutic purposes. Oral route is the most acceptable, easiest way and suitable route of drug administration for all kind of population due to their ease of manufacture and administration and enhance bioavailability. Inadequate absorption through the GI tract and hepatic metabolism effect cause the necessity to seek out an alternate route of drug delivery like parenteral route, transdermal route, subcutaneous route, etc. Among all the route of drug administration, nasal route of drug administration found more useful for the delivery of the drugs which are active in low doses and having less oral bio-availability like proteins and peptides. The history of development of nasal drug delivery dates back to earlier topical applications of drugs intended for local effects [1]. In the first 1980s the introduction of the nasal route comes out as a most promising systemic delivery which substituted the other conventional drug delivery routes. Nasal therapy, has been recognized sort of treatment within the Ayurvedic systems of Indian medicine, it's also called "NASAYA KARMA". In addition, nasal mucosa is found to be highly permeable for more compounds than the alimentary canal because of the absence of gastric juices, pancreatic and gastric

WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES

(An ISO 9001:2015 Certified International Journal)

An International Peer Reviewed Journal for Pharmaceutical and Medical Research and Technology

ISSN 2278-4357
Impact Factor 7.632
IC Value 84.65

WED, JULY 05 2023 | 11:52:20 AM

World Journal of Pharmacy and Pharmaceutical Sciences (WJPPS

Abstract

A REVIEW STUDY ON- MEDICATED LOZENGES AS AN EFFECTIVE DOSAGE FORM

Abhijeet Sunil Kukde*, Varsha M. Barethiya and Dr. Gouri R. Dixit

ABSTRACT

In spite of several dosage forms available within the market place for effective action, the lozenges finds a special importance as they are the simplest dosage forms for formulating large dose of medicaments. The anatomy of mouth and cheek favours easy and effective systemic absorption of drug for better patient compliance and also especially for paediatrics and geriatrics patient because of their palatable taste imparted by the excipients. Lozenges are used for patients who cannot swallow solid oral dosage forms also as for medications designed to be released slowly to yield a continuing level of drug in the oral cavity. Lozenges are the flavoured medicated dosage forms intended to be administered and held in the mouth or pharynx containing one or more medicaments usually in the sweetened base. Lozenges are one of the very convenient and better innovative dosage form for oral confectionary products. Medicated lozenges enhances the retention time of the dosage form in mouth which increases bioavailability, reduces gastric irritation and bypasses first pass metabolism. Hence, Lozenges are an attractive, easily acceptable and most prominent dosage form for all the age group of population.

Keywords: Lozenges, sugar- bases, crystallization, medicaments, temperature.

[Full Text Article]

ISSN (Print) : 2321-3310; ISSN (Online) : 2321-3086
WORLD JOURNAL OF PHARMACEUTICAL SCIENCES
Published by ATOM and CELL PUBLISHERS

Screening of super disintegrants by formulating and evaluating fast dissolving tablets of ondansetron hydrochloride

Dhanashree R. Wasu
Department of Pharmaceutics, Priyadarshini J. L. College of Pharmacy, Hingna Road, Nagpur-440016, India

Kanchan P. Upadhye
Department of Pharmaceutics, Priyadarshini J. L. College of Pharmacy, Hingna Road, Nagpur-440016, India

Keywords: Fast dissolving tablets, super disintegrants, Ondansetron Hydrochloride

ABSTRACT

For a fast dissolving tablet to show fast disintegration, super disintegrants play a vital role. The objective of the present study is to screen three super disintegrants namely Cross carmallose sodium, Sodium starch glycolate and Cross povidone by formulating fast dissolving tablets and evaluating them. First, the tablet blends were subjected to pre compression parameters (bulk density, tapped density, angle of repose, Hausner's ratio and Car's index). Then the tablet blends were formulated in fast dissolving tablets of 200 mg each of Ondansetron Hydrochloride by direct compression method. The tablets of various batches had varied concentrations of the three super disintegrants individually. The tablets were then evaluated for various post compression parameters (weight variation, thickness, hardness, friability, wetting time, water absorption ratio, disintegration time, drug content and *in-vitro* drug release). Out of all the batches the formulation T8 showed best results which implied that Cross Povidone can be considered as a good super disintegrant and that batch was optimised.

Research Article

Formulation and development of osmotic drug delivery system using push-pull techniques for BSC Class I drug

Asawari D. Navghare, Suparna S. Bakhle

Department of Pharmaceutics, Priyadarshini J.L. College of Pharmacy, Nagpur, Maharashtra, India

Correspondence:
Dr. Mrs. Suparna S. Bakhle, Department of Pharmaceutics, Priyadarshini J.L. College of Pharmacy, Nagpur, Maharashtra, India.
E-mail: navghareasawari@gmail.com

How to cite this article:
Navghare AD, Bakhle SS. Formulation and development of osmotic drug delivery system using push-pull techniques for BSC Class I drug. Innov Pharm Pharmacother 2020;8(3):51-58.

Source of Support: Nil.
Conflicts of Interest: None declared.

ABSTRACT

Background: Oxybutynin HCL is a muscarinic antagonist indicated for the treatment of overactive bladder with symptoms of urge urinary incontinence, urgency, and frequency. Push-pull osmotic pump can be used for delivery of drugs having extremes of water solubility. Drug along with osmogents is present in the upper compartment whereas the lower compartment consists of polymeric osmotic agents. **Objective:** Osmotic drug delivery system based on push-pull technique has been formulated in the form of bilayer tablets using wet granulation method. **Method:** The tablets were coated with semi permeable membrane of cellulose acetate followed by film coating. Precompressional parameters of matrix tablets (bulk density, tapped density, Carr's, index Hausner's ratio, and angle of repose) are in the range of official standard, indicated that granules prepared. The post-compression parameters of extended release tablets (hardness, friability, weight variation, thickness, and drug content) were within the limits. The tablets were evaluated physic-chemically. **Results:** In FTIR study showed, there were no any interaction between the Oxybutynin HCl drug into HPMC, butylated hydroxyl toluene polymers, and into the all excipients at molecular level. The drug release pattern of final formulation was tested over the period of 18 h and it was found to be 81% which was comparable to that of reference product. The formulation F8 follows first-order release kinetics and the drug release mechanism was found to be non-Fickian anomalous diffusion. Oxybutynin release from the developed formulations was inversely proportional to the osmotic pressure of the release media, confirming osmotic pumping to be the major mechanism of drug release. **Conclusion:** The optimized formulation was found stable at accelerated and long-term conditions.

Keywords: BCS Class 1, bilayer, controlled release, osmogent, oxybutynin HCL, push pull system

Introduction

The pharmaceutical industry over the past decades has been facing tough challenges in brining (NCEs) to market for prevention and treatment of existing and newer diseases. Furthermore, the cost of developing NCEs is continually rising, and today it costs around US $ 1 billion to bring one NCE to market.[1] The earliest studies in the field of controlled drug delivery date back to the 1950s. Since then, a large number of drug products with controlled release (CR) characteristics, have been introduced. The incredible growth can be attributed to several advantages that these products offer, including improved patient compliance, better therapeutic efficiency, potential for cost saving, patentability, and opportunity for extending product lifecycle. Various technologies have been investigated to achieve different kinds of modified release, for example, sustained, delayed, pulsatile, targeted, and programmed release. Regardless of the delivery type, the main mechanisms associated with drug transport in these systems include diffusion, swelling, erosion, ion exchange, and osmotic effect.[2] Among the various CR drug delivery systems available in market, oral CR systems hold the major market share because of their obvious advantages of ease of administration and better patient compliance.[3] A number of design options are available to control or modulate the drug release from an oral dosage form. The majority of oral CR dosage forms falls in the following categories, matrix systems, reservoir systems, and osmotic systems. In matrix systems, the drug is embedded in a polymer matrix and the release takes place by partitioning of drag into the polymer matrix and the release medium. In contrast, reservoir systems have a drug core surrounded/coated by a rate controlling membrane. However, factors such as pH, presence of food, and other physiological factors may affect drug release from conventional CR systems (matrix and reservoir). Osmotic systems utilize the principles of osmotic

Access this article online	
Website: www.innpharmacotherapy.com	**e-ISSN:** 2321-323X
Doi: 10.31690/ipp.2020.v08i03.002	**p-ISSN:** 2395-0781

A Novel Herbal Topical Formulation for Wound Healing

Posted: 20 Feb 2020
Last revised: 24 Feb 2020

Sukanya Korewar (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=3994514)
Priyadarshini JL College of Pharmacy, Nagpur

Shilpa Deshpane (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=4007479)
Independent

Shubhada Mangrulkar (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=4007486)
Independent

Alpana Asanani (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=4007488)
Independent

Kumar Pratyush (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=4007490)
Independent

Dinesh Chaple (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=4007492)
Independent

Date Written: February 19, 2020

Abstract

Abstract

Wound healing is dynamic and complex process which requires suitable surrounding to promote healing. Routine wound healing management is tedious and time consuming to promote wound healing. Crocculus hirsutus is used traditionally as anti-inflammatory, antimicrobial and antioxidant.The extract is having gelling and film forming property. This can be utilized for making medicated films for the therapy of wound healing activity. But there is no scientific evidences to prove these activities with the help of preclinical in-vivo screening. There is no marketed dosage form of the selected extract. Hence the objective of the present study is to formulate the topical film for management of wound.

Methodology: The ethanolic extract of leaves was pharmacologically evaluated and showed significant anti-inflammatory, antioxidant and antimicrobial activity. The films were prepared by incorporating inert excipients in ethanolic extract and wound healing activity was evaluated in experimental animals by excision method. It is observed that the excision wound was significantly recovered with the help of formulated film.

Keywords: Wound healing,cocculus hirsutus

JEL Classification: I

WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 9, Issue 6, 1543-1552. Research Article ISSN 2277– 7105

FORMULATION AND EVALUATION OF ANTIFUNGAL HERBAL HAIR GEL

Charudatta S. Jog, Dr. Alpana J. Asnani and Dr. Vijay Gulkari*

Priyadarshini J.L. College of Pharmacy, Electronic Zone, Hingna, Nagpur (India).

Article Received on
24 March 2020,

Revised on 14 April 2020,
Accepted on 04 May 2020,

DOI: 10.20959/wjpr20206-17553

***Corresponding Author**
Dr. Vijay Gulkari
Priyadarshini J.L. College of Pharmacy, Electronic Zone, Hingna, Nagpur (India).

ABSTRACT

Medicinal plants have been a major source of cure for human diseases since time immemorial. It is no wonder that the world‟s one-fourth population i.e. 1.42 billion people, are dependent on traditional medicines for the treatment of various ailments. Murraya koenigii, belongs to the family Rutaceae, Commonly known as curry-leaf tree, Carbazole alkaloids, the major constituents of plant are known to have cytotoxic, antioxidant, antimutagenic and anti-inflammatory activities. The leaves are rich in mono-terpenoids and sesquiterpenoids which exhibited antimicrobial activities. Azadirachta indica, also known as Neem, Nimtree and Indian Lilac is a tree in the mahogany family – Meliaceae. Neem contains several fatty acids such as linoleic acid, stearic acid, oleic acids that nourishes and revitalize rough hair to a smooth silky texture. Curry leaves has antibacterial antifungal and anti- inflammatory properties which fights against dandruff and infections of the scalp.

KEYWORDS: mono-terpenoids and sesquiterpenoids.

INTRODUCTION

Recently considerable attention has been paid to utilize eco-friendly and bio- friendly plant based products for the prevention and cure of different human diseases. It is documented that most of the world’s population has taken in traditional medicine, particularly plant drug for the primary health care. Antimicrobial properties of certain Indian medicinal plants were reported based on folklore information and only few reports are available on inhibitory activity against certain pathogenic bacteria and fungi.