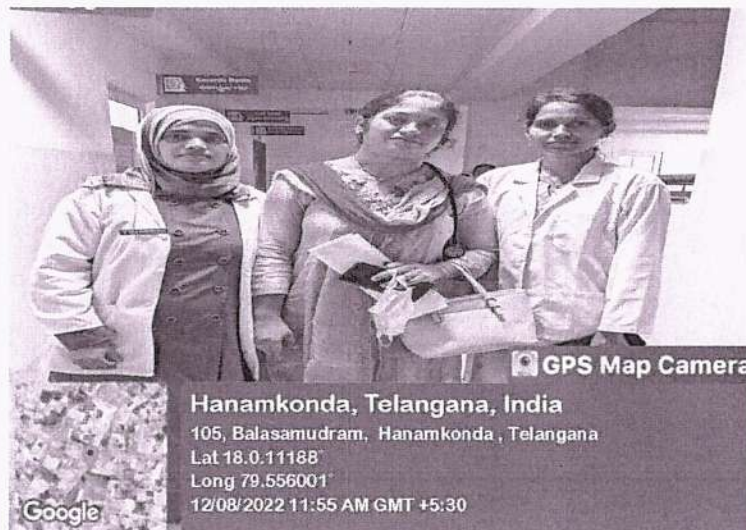


Outcomes of MOU



Students working with doctor in Mamatha heart clinic as a part of MOU

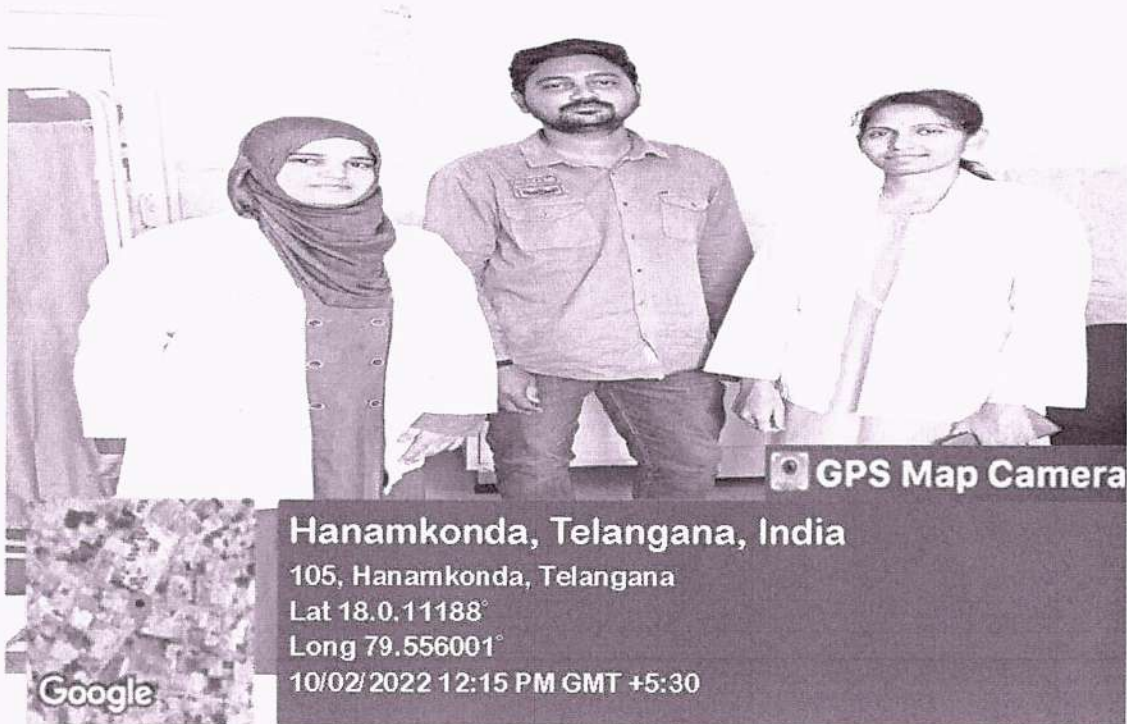



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Long 79.556001°

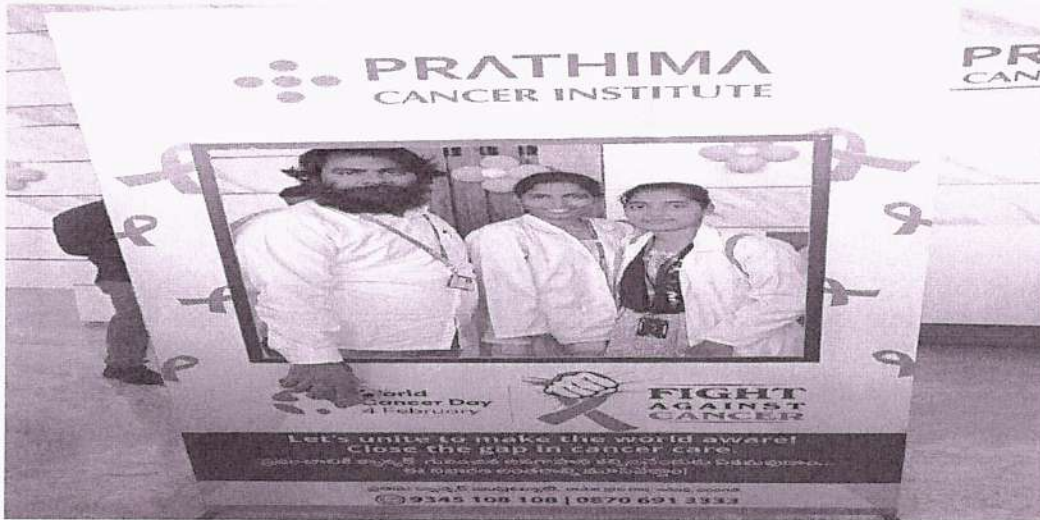
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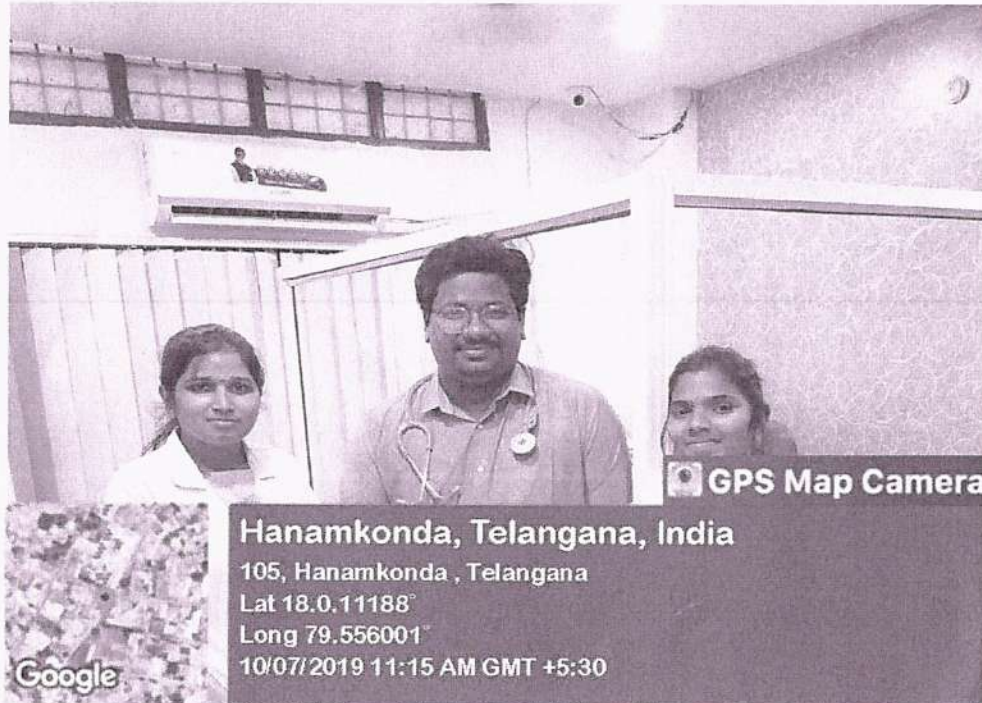
Students at Key smile Multispecialty Dental clinic



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Students along with HOD Dr.Sharvana as a part of their project work in Pratima cancer institute



Student in Manisha Neuro Psychiatric clinic and Counselling Centre as a part of their project work



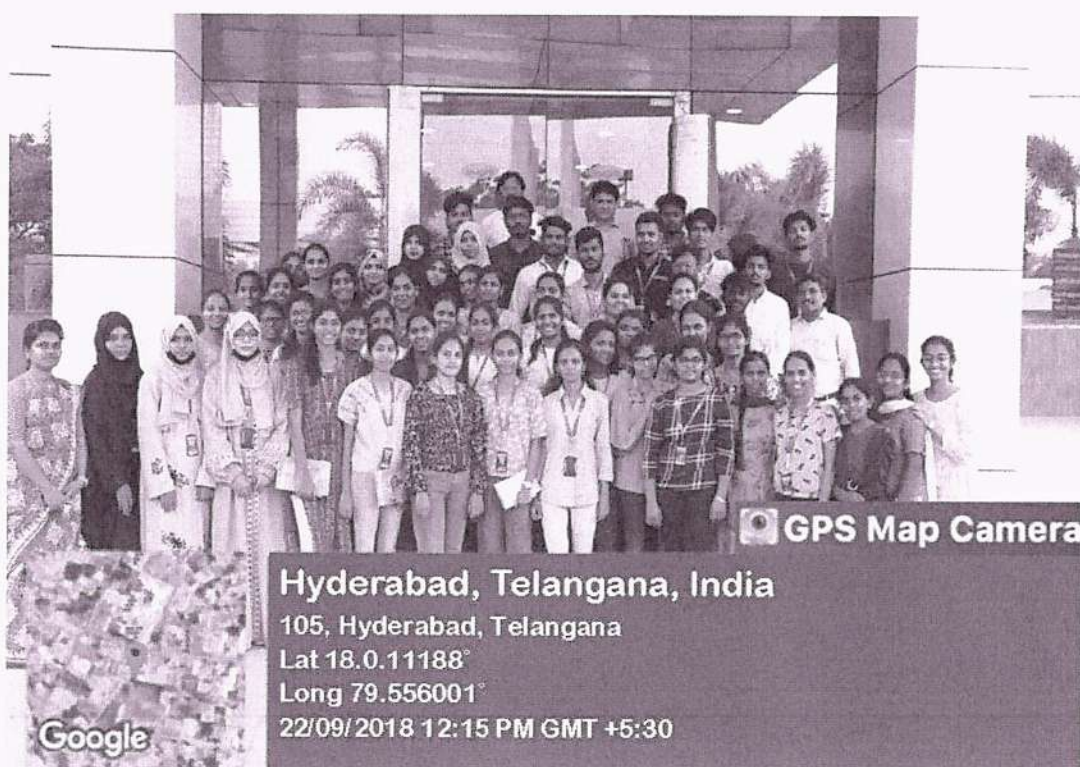

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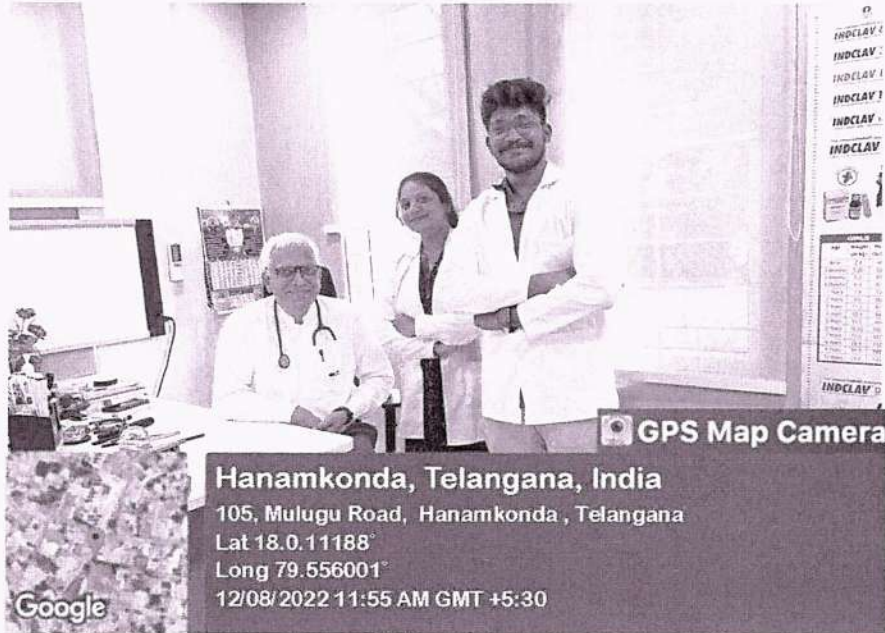
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Students Industrial visit to SP Accure Labs Private limited as a part of MOU with Vaagdevi College of Pharmacy



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Students as a part of their project work in Ajara hospital




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Students as a part of their project work in Durgam Hospital



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Students as a part of their project work in Hope's Hospital



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Students as a part of their project work in Hope's Hospital



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Students as a part of their project work in
Krishna Hospitals



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Students as a part of their project work in Chakravarthy Hospitals



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Students as a part of their project work in SVR Multi Speciality Hospital



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Students as a part of their project work in Mamatha Heart Clinic



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REVIEW ARTICLE

Formulation and Evaluation of Carvedilol Sustained Release Capsules by Semisolid Matrix Filling Technique

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ABSTRACT:

The objective of the study was to prepare semisolid capsules of poorly water-soluble drug Carvedilol using a combination of technologies involving solid dispersion preparation and converting it into semisolid matrix filled in hard gelatin capsule. Different excipients like Gelucire 44/14, poloxamer 188, gelatin, PVPK30, PEG6000 were used. Fifteen capsule formulations were prepared and assessed for their release characteristics. Lipid matrix formulations prepared with increasing amount of polymer showed a substantial decrease in release rate of drug in case of poloxamer188. Whereas gelucire 44/14, gelatin, PVPK30, and PEG6000 showed immediate release the mechanism of drug release from the test formulations were studied. The possible modification of carvedilol release kinetics by using poloxamer in the SSM was studied. Results indicate that poloxamer188 is an appropriate carrier for the development of sustained release drug delivery systems and Gelucire 44/14 a highly hydrophilic and lipophilic balance (HLB) excipient, acts as release enhancer in the different ratios studied. Among all the formulations Carvedilol formulation with poloxamer188 in the ratio of (1:3) showed sustained release. Release kinetics studies were performed. The formulation with poloxamer in 1:3 ratio follows first order and Higuchi order release kinetics governed by Fickian diffusion mechanism with R² value 0.992.

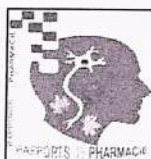
KEYWORDS: Carvedilol, Gelucire44/14, Poloxamer188, Gelatin, PVPK30, PEG6000.

INTRODUCTION:

Solid dispersion can be defined as "The dispersion of one or more active ingredients in an inert carrier or matrix at solid state"⁽¹⁾. Oral drug delivery is the most widely utilized route of administration among all the routes that have been explored for systemic delivery of drugs via pharmaceutical products of different dosage form. Oral route is considered as most natural, uncomplicated, convenient and safe due to its ease of administration, patient acceptance, and cost-effective⁽²⁾ manufacturing process⁽³⁾.

The goal in designing sustained delivery systems⁽⁴⁾ is to reduce the frequency of the dosing or to increase effectiveness of the drug by localization at the site of action, reducing the dose required or providing uniform drug delivery^(5,6). A single dose of a drug that is released over a sustained period of time to maintain a near constant or uniform blood level of a drug often translates into better patient compliance, as well as enhanced clinical efficacy of the drug for its intended use⁽⁷⁾. There are certain considerations for the preparation of sustained release formulations. If the active compound has a long half-life, it is sustained on its own⁽⁸⁾.

Carvedilol is a non-selective beta adrenoreceptor blocker, used in the treatment of hypertension⁽⁹⁾. The drug was selected as a model drug for the investigation because this drug has low molecular weight (carvedilol



INCIDENCE OF CATARACTS IN WARANGAL DISTRICT, TELANGANA STATE: A PROSPECTIVE OBSERVATIONAL STUDY

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ABSTRACT

Background: Cataract is the major cause of blindness worldwide, especially in tropical belt, where the densely populated developing countries are located. Survey in different climatic zones in northern India have found cataract prevalence of 4-10% and steadily increasing after the age 30 and with prevalence 13-36% among age of 30 and above. Our aim is to study the incidence of cataracts in Warangal District, Telangana State. **Material and Methods:** It is a prospective observational study in which all the patients suffering with cataracts were included as subjects. **Results:** Among the total 83,827 cases in outpatient department females are found to be 41,167 (0.49%) and males found to be 42,660 (0.50%) of 6816 inpatients admitted, the female population was found to be 3285 (0.48%) and male population was found to be 3531 (0.51%). The total number of cataract operations done including TOL were 5429 and females found to be 2653 (0.48%) and males 2726 (0.50%). The total corrected refractive errors were 31,427 and females were found to be 17,538 (0.55%) and males were 13,889 (0.44%). **Conclusion:** In conclusion, we have documented the incidence of cataracts in which males more affected than females.

Keywords: Cataracts, Blindness, Incidence, Ophthalmology.

INTRODUCTION

Cataract is defined as accumulation of proteins in the lens of eye where the cloudiness can be observed and the symptoms can be seen are mainly watery eyes and blurred vision. Cataract is a major cause of blindness worldwide, especially in the tropical belt, where the most of the densely populated developing countries are located. In India 60% of all blindness may be due to cataract. Various surveys in India show that nearly 7% of the population suffers from cataracts and nearly 1.5% of the population is blind due to cataract (1,2). Accordingly, blindness control programmes in India have focused primarily on cataract. Although such programmes have improved the coverage of cataract surgery they have not always resulted in good postoperative vision outcomes. Surveys in different climatic zones in northern India have found cataract prevalence of 4-10%, with senile cataract appearing and steadily increasing after age 30 and with prevalence 13 - 36% among persons aged 30 and older (3,4). The aim is to study

the incidence of Cataracts in Regional Eye Hospital at Warangal district in Telangana state.

MATERIAL AND METHODS

It is a prospective observational study conducted in patients from "Regional Eye Hospital" located at Warangal. Patients were explained about the study & informed consent forms were sought by explaining them in their local language. Institutional Human Ethical Committee Endorsement was obtained after submission of protocol and IHEC No. is MGM/VCOP/PHARMD/V/12/2017.

Inclusion criteria:

All the cataract patients of age above 40 years (Males and Females).

Exclusion criteria:

Trauma to eye and other complications. Pediatric patients. Pregnancy and Lactating mothers were excluded from this research work (5-9).

Study type: A Prospective Observational Study conducted in the Regional Eye Hospital, Warangal, Telangana State.

Statistical analysis: We had calculated the Incidence by using formula

Incidence = Number of new cases at a particular area to the total number of cases at that particular area.

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Evaluation of Antioxidant, Antimicrobial and Anticancer activity of Thiazole Tagged Isatin Hydrazones

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Abstract: Isatin and its derivatives is versatile lead molecule for potential bioactive agents and shows wide spectrum of activities. In this study, we evaluated antioxidant, antimicrobial and cytotoxic activity of isatin-3-[N²-(2-benzalaminothiazol-4-yl)] hydrazone derivatives using well defined models. Antioxidant activity of the isatin derivatives (Va-Vj) was evaluated by using the 1, 1-diphenyl-2-picryl hydrazine radicals scavenging assay. The antimicrobial activity is evaluated by cup plate method and anticancer activity is evaluated by MTT assay against HBL-100 & HeLa cell lines. Compound Vh (R = 5-Cl, R¹ = OH & R² = OCH₃) showed good antioxidant activity with the IC₅₀ of 8.09 μM. In addition Ve and Vi have showed most active antibacterial activity against *Bacillus subtilis*, *Staphylococcus aureus* and *Escherichia coli* with a Zone of Inhibition (mm) 20, 16, 18 and 14, 12, 15 on respective organism at 100 μg/disc. The compound Vi have produced a good antifungal activity against *Aspergillus niger* and *Clostridium vericulata* with the zone of inhibition values of 9 and 8 mm respectively. These isatin derivatives also among the test compounds, compound Vd (R = 5-Cl, R¹ = OH & R² = OCH₃) and compound Vh (R = 5-Cl, R¹ = OH & R² = OCH₃) have shown nearly equal cytotoxic activity with IC₅₀ values of 246.53 μM and 247.29 μM against HBL-100 cell lines and HeLa cell lines respectively. From the results, isatin derivatives showed powerful antioxidant activity, antimicrobial and anticancer activity may be due to the halogens substituted at 5th position of isatin. The standard drugs used were ampicillin, clotrimazole, cisplatin and ascorbic acid for antibacterial, antifungal, anticancer and antioxidant respectively.

Keywords: Isatin derivatives; zone of inhibition; cytotoxic activity; DPPH method.

1. Introduction

Oxidative stress has been implicated as a major role in the onset and progression of a vast variety of clinical abnormalities including neurodegenerative disorders. Free radicals play an important role in many physiological and pathological conditions.¹ In general, the generation and scavenging of oxygen free radicals is

balanced and any imbalance or excessive amounts of active radicals may contribute to disease development. It has been found that, free radical reactions can produce deleterious modifications in membranes, proteins, enzymes, DNA and increasing the risk of diseases.² Therefore, it is important to find effective scavengers of free radicals for prevention and treatment of such disorders.

Infections caused by multi-drug resistant bacteria are of major health concern worldwide. Particularly important are infections caused by the Gram-positive bacteria *Staphylococcus aureus* and species of the genus *Enterococcus*, due to increasing incidence of infections caused by these microorganisms in hospitals and communities, and their ability of developing antibiotic resistance to multiple antibiotics. Due to some serious side effects in newly introduced antibacterial agents such as semi-synthetic streptogramins quinupristin/dalfopristin, daptomycin, the development of a diversified series of antimicrobials still remains a necessity.³ Indole and its analogues are good pharmacophore for designing several chemotherapeutic reagents which exhibit wide spectrum of antimicrobial activities.⁴

The development of new anticancer therapeutic agents is one of the fundamental goals in medicinal chemistry. Cytotoxicity and genotoxicity of anticancer drugs to the normal cells are major problems in cancer therapy and engender the risk of inducing secondary malignancy.⁵ A dose of anticancer drug sufficient to kill tumor cells is often toxic to the normal tissue and leads to many side effects, which in turn, limits its treatment efficacy. In recent years, there has been a concerned search for the discovery and development of novel selective anticancer agents, devoid of many of the unpleasant side effects of conventional anticancer agents. The synthesis of a newer class of anticancer agents is in need of time.

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Advances in Drug Delivery

Volume -V

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A handwritten signature in blue ink, appearing to be 'Y. Madhusudan Rao'.

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Sublingual Drug Delivery

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Introduction

Oral administration is the most widely used route because of ease of ingestion, pain avoidance, and most importantly patient compliance. Solid oral delivery systems do not require sterile conditions and are therefore less expensive to manufacture. One important drawback of solid dosage forms is the difficulty in swallowing (dysphasia) or chewing in some patient's particularly pediatric and geriatric patients. The problem of swallowing is common phenomenon in geriatric patient due to fear of choking, hand tremors, dysphasia and in children's due to under developed muscular and nervous systems.

The unique environment of the oral cavity offers its potential as a site for drug delivery, because rich blood supply and direct access to systemic circulation, the oral mucosal route is suitable for drugs which are susceptible to acid hydrolysis in the stomach or which are extensively metabolized in the liver. The continuous secretion of saliva results in rapid removal of released drug and this may desire that the oral cavity be restricted to the delivery of drugs, which have a short systemic circulation. The mucin film, which exists on the surface of the oral mucosa may provide an opportunity to retain a drug delivery system in contact with the mucosa for prolonged periods, if it is designed to be

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Pelletization Techniques

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Introduction

In the past few eras, pharmaceutical invention and research on drug delivery has reformed astonishingly and even greater changes are anticipated in the forthcoming future to supplement desirable therapeutic intents with minimizing side effects. The key purpose of the drug therapy is to accomplish a curative and healing effect. For the motive, to improve and make advances in the delivery of pharmaceutical compound(s) and therapy, the area is being extensively researched and a marked growth have seen till date and development is still on going.

Drugs are being consumed to enrich health and expand life. To acquire the assumed therapeutic response and to be absorbed as well as transported to the site of action at the right time, an appropriate amount of the active drug is needed. The rate of input drug quantity can be regulated based on various drug delivery systems and routes of administration to maintain the effective level of essential concentration for as long as necessary.

Drug delivery is an approach of transporting a medicinal compound of required dose into the body to safely accomplish the desired therapeutic effect in animals/ humans. Drug delivery systems are the technologies that facilitate the ingestion of engineered therapeutic agent(s) into the

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Solid Dispersion

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Introduction

The oral of drug administration is the most common and preferred method of delivery due to convenience and easy of digestion. Form a patient's perspective, swallowing a dosage form is a comfortable and a familiar means of taking medication.

Although the oral route of administration is preferred, for many drugs it can be a problematic and inefficient mode of delivery for a number of reasons. Limited drug absorption resulting in poor bioavailability is paramount amongst the potential problems that can be encountered when delivering an active agent via oral route. Drug absorption from the gastrointestinal (GI) tract can be limited by a variety of factors with the most significant contributors being poor solubility and/or intestinal fluids before it can then permeate the membranes of the GI tract to reach systemic circulation. Therefore, a drug with poor membrane permeability will typically exhibit permeation rate limited absorption. Hence, two areas of pharmaceutical research that focus on improving the oral bioavailability of active agents include (1) enhancing solubility and dissolution rate of poorly water soluble and (2) enhancing permeability of poor permeable drugs. This article focus on the former, in particular, the use of solid dispersion technologies to improve the dissolution

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Chewing Gum as Drug Delivery

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Introduction

Medicated chewing gum is a solid, single-dosage preparation that has been to be chewed and not swallowed; chewing gum contains one or more active ingredients that are released by chewing. A medicated chewing gum is intended to be chewed for certain period of time, required to deliver the dose, after which the remaining mass is discarded.

During the chewing process the drug contained in the product is released from the mass into saliva and could be absorbed through the oral mucosa or swallowed reaching stomach for gastro-intestinal absorption.

Chewing gum can be used as a convenient modified release drug delivery system.

Medicated chewing gums are currently available for pain relief, smoking cessation, travel illness, freshening of breath, obesity. (Savaliya prathik *et al.*, 2011)

There are two absorption pathways which are possible to introduce the active ingredient into the systemic circulation giving rise to a systemic effect. Drug absorbed directly via the buccal membrane avoids metabolism in the GIT and the first-pass effect of the liver, it might



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Dental Inserts

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Dental Inserts

Insert means the dosage form to place or introduce into the body. The insert mainly used for dental cavity are called as dental insert.

The mouth is a naturally dirty field, besides its high content of microflora, its high moisture content (96%) and appropriate temperature (37 °C) increases the incidence of bacteria. (Dolan, Matulka, & Burdock, 2010). Development of bacteria is a concern for dentist as it is associated with failure of dental procedures especially dental implants. Anaerobic gram positive cocci, and anaerobic gram negative rods are amongst the most common strains involved in dental surgery infections. The use of prophylactic antibiotics to combat these strains becomes a general practice in dental implants and procedures. High dose of systemic antibiotics are used to achieve adequate concentrations in the blood to prevent the growth and dissemination of bacteria at the site of implant surgery. The adverse effects associated with the use of systemic antibiotics makes it unappealing, hence the local application of an antibiotic medicated implant will be advantageous. Main advantages of dental inserts are localized action, reduced frequency of administration, reduced side effects and sustained action. Some of the disadvantages of dental inserts are it requires technical person for the administration and drug loss through saliva.

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