A Prospective Observational Study On The Clinical Profile, Efficacy And Adverse Effects Of Beta-Blockers In Patients With Liver Cirrhosis.

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Abstract

Background: Non-selective beta-blockers (NSBBs) are the established foundation of treatment for prevention of first bleeding and rebleeding of oesophageal varices in cirrhosis patients. NSBBs include propranolol, carvedilol, nadolol, and timolol. Fixed doses of NSBBs are discouraged and preferably the dose should be titrated. Mainly, in case of low blood pressure and doses must be carefully tapered, with signs of decreased organ perfusion or significant hypotension.

Methodology:A total of 150 patients were considered. Informed consent was obtained from all the subjects.This study appraises the clinical outcomes, safety and effcacy of Carvedilol, metaprolol ,propranolol and detects the adverse effects in patients who come to OP department. BP and PR were collected by using oximeter. We also assess patients liver status by using prognostic markers like child Pugh, meld, maddreys function score and correlated

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FORMULATION AND *IN-VITRO* EVALUATION OF BOSENTAN MONOHYDRATE GASTRORETENTIVE TABLETS FOR TREATMENT OF PULMONARY ARTERY HYPERTENSION

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ABSTRACT

Aim: Bosentan monohydrate is an endothelin receptor antagonist which is used for the treatment of pulmonary artery hypertension. Bosentan monohydrate gastro retentive tablets were formulated in the present research by using various polymers, sodium bicarbonate as gas generating agent by wet granulation technique. Absorption maximum of Bosentan monohydrate was determined; analytical method was developed and calibration curve was constructed. **Methods:** The formulation blend was subjected to various flow properties, post compression and floating parameter studies. *In vitro* dissolution studies were conducted and release data was subjected to kinetic analysis. **Results:** Calibration curve showed high degree of linearity which represents the sensitivity and accuracy of developed UV analytical method. Pre compression parameters revealed that all results were within the ideal limits indicated the suitable flow properties of the powder blend. All Bosentan monohydrate gastro retentive tablets indicated uniform post compression parameters like weight uniformity, thickness, hardness, friability. Floating parameters indicated the floating ability and prolonged floating duration for gastro retentive delivery of Bosentan monohydrate. Drug content studies revealed all formulations showed uniform drug content. *In vitro* studies revealed that Bosentan monohydrate release is sustained and prolonged for 8 – 12 hr which ensures selective drug absorption from stomach and patience compliance. **Conclusion:** Formulation S6 was identified as optimised formulation with respect to its ideal pre and post compression properties, floating parameters and *in vitro* drug release sustained for prolonged period. Release kinetic analysis of optimized formulation revealed that the S6 formulation followed zero order kinetics of drug release.

Evaluation of the activity of trans-Resveratrol alone and in combination with Amlodipine and Pioglitazone against Fructose induced metabolic syndrome rats

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Abstract

Metabolic syndrome (MS) is a cluster of conditions that cause an increase in the risk of diabetes, heart disorders, and stroke.

The present research was completed in Wistar rats, in which Metabolic Syndrome (MS) was induced with a High Fructose Diet. Animals were randomly divided into 7 gatherings and the test group animals received Resveratrol (RSVT), Amlodipine (AML), Pioglitazone (PIO), Resveratrol+Amoldipine, and Resveratrol+Pioglitazone at different doses for 5 weeks. Various behavioral, biochemical, and histopathological parameters were estimated.

AML alone and along with RSVT was found to reduce diastolic and systolic pressures, there was the reduction in BP in the remaining groups. There was a significant reduction in serum insulin and Fasting glucose level (FGL) in all the treatment groups. And there was a noticeable reduction in the levels of total glycerides (TG), total cholesterol (TC) along with LDL, HDL, and VLDL when compared to the control group and HFD group. Histopathological study revealed that there was a reduction in the deposition of lipids in liver cells and aorta as compared to HFD group.

The outcomes showed the defensive mechanism of Resveratrol against fructose-induced Metabolic Syndrome. The mechanism of protection may be due to an escalation of cellular antioxidants. The activity was found to increase in combination with amlodipine and pioglitazone.

Keywords: Amlodipine, Fructose, Metabolic syndrome, Pioglitazone, Resveratrol.

INTRODUCTION

International Diabetes Federation (IDF), National Cholesterol Expert Program Adult Treatment Program III (NCEP ATP III), World Health Organization (WHO)1, and harmonized criteria were used to define the term "metabolic syndrome", these criteria include central obesity, elevated triglycerides, reduced high-density lipoprotein (HDL), raised blood pressure (BP), and fasting plasma glucose (FPG) or fasting glucose levels (FGL)2. Diagnostic criteria for metabolic syndrome often include central obesity and any two of the risk variables3.

Reaven initially coined the term metabolic syndrome (MS), also known as syndrome X, in 1988 to refer to the presence of atherogenic risk factors and underlying insulin resistance. The World Health Organization (WHO) improved the definition in 1997 to refer to a particular grouping of risk factors for type 2 diabetes and cardiovascular diseases, including abdominal obesity, high blood pressure, atherogenic dyslipidemia, stroke, cardiovascular disease, hyperglycemia, insulin resistance, hyperuricemia, and proinflammatory state4,5,6.

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Clinical Spectrum of Alcoholic Liver Disease in Subjects Attending Outpatient Department at a Tertiary Care Hospital

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Authors' contributions

This work was carried out in collaboration among all authors. Author KS managed the literature searches, wrote the protocol, performed data analysis and interpretation and manuscript writing. Authors PPR and PS performed data collection and assembly of data. Author PNR helped in provision of study materials or patients, conception and design of study. Authors AVKB and ASR helped in administrative support and provided guidance in manuscript writing. All authors read and approved the final manuscript.

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ABSTRACT

Background: Alcoholic liver disease is one of the primary medical complication of chronic ethanol abuse. It encloses a wide spectrum of diseases comprising of fatty liver, alcoholic hepatitis, alcoholic cirrhosis and hepatocellular carcinoma.
Methodology: A prospective, observational study was done at AIG hospitals in the department of hepatology for a period of 6 months. A total of 200 patient's diagnosed clinically and biochemically with various spectrum of ALD were recruited for the study.Non-invasive prognostic scores were calculated at the time of admission and correlated with severity of disease.
Results: Among 200 study participants, 34.8% belongs to age group of 36-45 years. All were male patients with age group ranged from 25 to 73 years. We observed the high levels of alkaline phosphatese, aspartate aminotransferase/alanine aminotransferase ratio, mean corpuscular

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FORMULATION DEVELOPMENT AND IN-VITRO EVELUATION OF SUSTAINED RELEASE TABLETS OF REPAGLINIDE

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ABSTACT

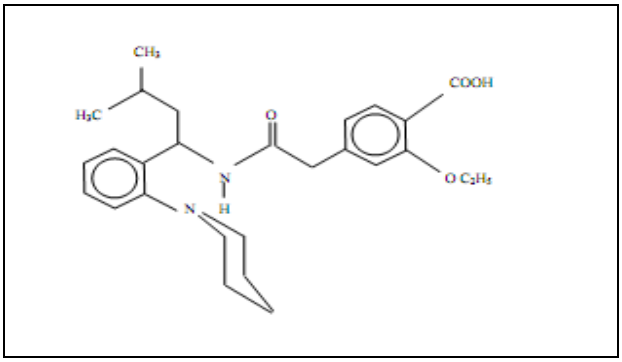
Repaglinide is an oral antihyperglycemic agent used for the treatment of non-insulin dependent diabetes mellitus (NIDDM). Repaglinide is an amino acid derivative that induces an early insulin response to meals decreasing postprandial blood glucose levels. The major problem in oral drug formulations is low and erratic bioavailability, which mainly results from poor aqueous solubility. Solid dispersions is the techniques and the most attractive processes to improve solubility of poorly soluble drugs. Here the solubility of Repaglinide is enhanced by solid dispersions with PEG 6000 and urea as carriers. Among the various solid dispersions prepared, the formulation FSDPN3 i.e., the solid dispersion of Repaglinide with PEG6000 prepared by Fusion method shows faster dissolution rate it was decided to use formulations FSDPN3 to formulate sustained release tablets using different polymers like HPMC, EC ,Guar gum and Xanthum gum by direct compression technique. Among the various sustained release tablets of Repaglinide solid dispersion prepared, the formulation F2 shows complete release of drug in 12 hrs, which is considered as best formulation for sustained release tablets of Repaglinide.

KEYWORDS: Antihyperglycemic, postprandial, xanthum gum, direct compression technique.

INTRODUCTION

Repaglinide (Prandin) is an oral insulin secretagogue of the meglitinide class. This agent is a derivative of benzoic acid & chemically it is: (S)-2-ethoxy-4-{2-[3-methyl-1- [2-(1-piperidinyl) phenyl] butyl] amino]-2-oxoethyl} benzoic acid.

Structure:



MATERIALS

Repaglinide was obtained from Chandra Labs, Hyderabad, India. Polyethylene glycol 6000 from S.D. Fine Chem. Ltd, Mumbai, India. Urea from S.D. Fine Chem. Ltd, Mumbai, India. Micro Crystalline Cellulose from S.D. Fine Chem. Ltd, Mumbai, India. Xanthum gum from S.D. Fine Chem. Ltd, Mumbai, India. Guar gum from S.D. Fine Chem. Ltd, Mumbai, India. Magnesium stearate from S.D. Fine Chem. Ltd, Mumbai, India. Talc from S.D. Fine Chem. Ltd, Mumbai, India. Ethyl cellulose from S.D. Fine Chem. Ltd, Mumbai, India. HPMC from S.D. Fine Chem. Ltd, Mumbai, India

Preparation of calibration curve for repaglinide:

A. Standard curve in 0.1N HCL by using U.V spectrophotometer

Stock Sample Preparation: Accurately weighed 100 mg of drug was first dissolved in100 mL of 0.1N HCl in 100 mL of volumetric flask to make a concentration of 1000 µg/mL (primary stock solution). 5 mL of primary stock solution was pipetted out into 50 mL of volumetric flask and volume was adjusted with 0.1N HCL to make a concentration of 100µg/mL (secondary stock solution).

Sample Preparation: From the secondary stock solution pipette out 0.2, 0.4, 0.6, 0.8, 1.0 ml in to 10ml of volumetric flask and volume made up to with 0.1N HCl to give various concentrations such as 2,4,6,8,10 µg/mL were prepared for calibration curve. Standard curve was plotted by taking absorbance of secondary stock solutions in UV double beam spectrophotometer at 292 nm.

B. Standard curve in 6.8pH phosphate buffer by using UV spectrophotometer

Stock Sample Preparation: Accurately weighed 100 mg of drug was first dissolved in100 mL of 6.8pH

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FORMULATION AND EVALUATION OF MEDICATED HERBAL TOOTHPASTE

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ABSTRACT

The aim of current research to formulate herbal toothpaste utilizing plant extract like *Azadhiracta indica* leaves, *Phyllanthus niruri* leaves, *Spathodea companulata* leaves, aloe vera, Cinnamon bark other ingredient are Camphor, Clove, Honey. The plant extracts ingredient possesses the antibacterial activity. The herbal toothpaste formulated which can satisfy all the required condition to keep the mouth fresh and prevent tooth decay by bacteria. Physical examination: Colour-Pale yellowish white, smooth in nature, relative density-10.2, PH-8.2, Spreadability- Good and stable formulation. The anti-microbial evaluation against *Staphylococcus aureus* reveal that formulated herbal tooth paste exhibited notable activity with ZOI of 16.0 mm at MIC of 25µg/ml. the outcome of this research herbal toothpaste shows equal patronizing and engrossing passion over the marketed preparation it was consider after the comparing the marketed preparation with formulated herbal toothpaste. It has been good scope in dental health of public.

Keywords: Herbal Ingredient, Toothpaste, Antibacterial, Dental, ZOI.

INTRODUCTION

Plants are indispensable to man for his life. The three important necessities of life food, clothing and shelter and a host of other useful products are supplied to him by the plant kingdom. Nature has provided a store house of remedies to cure ailments of mankind. The knowledge of drugs has accumulated over thousands of years as a result of man's inquisitive nature, so that today we possess many effective means of ensuring healthcare. Today a vast store of knowledge concerning therapeutic properties of different plants has accumulated.

Nature always stands as a golden mark to exemplify the outstanding phenomena of symbiosis. In the western world, as the people are becoming aware of the potency and side effect of synthetic drugs, there is an increasing interest in the natural product remedies with a basic approach towards the nature. Throughout the history of mankind, many infectious diseases have been treated with herbals. A number of scientific investigations have highlighted the importance and the contribution of many plant families. Medicinal plants play a vital role for the development of new drugs. The bioactive extract should be standardized on the basis of active compound. The bioactive extract should undergo safety studies. Almost, 70% modern medicines in India are derived from natural products. India has a very small share (1.6%) of this ever-growing global market. To compete with the growing market, there is urgency to expeditiously utilize and scientifically validate more medicinally useful plants [1].

Pharmacognosy is the infrastructure on which depends evolution of novel medicines. The crude drugs also provide essential intermediates for final synthesis of

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A STUDY ON EFFECTS OF PASSIVE SMOKING

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ABTRACT

According to World Health Organization tobacco is the leading cause of death world wide. Passive smoking or Environmental tobacco smoking (ETS) exposure is also known as “Second hand smoking” or “Involuntary smoke”. It may cause pulmonary or extra pulmonary health effects. Tobacco smoke contains over 4000 chemicals in the form of particles and gases, they have irritant properties and found to be suspected human carcinogens. Women have unique heath effects like reproductive and non reproductive problems and beside these disease which are common to both genders rise in women. Children exposed with this smoke have serious respiratory illness than adults. Inhalation of the second hand smoke is hazardous to adults and particularly in children and may cause lung cancer and coronary heart disease in non-smoker adults. ETS exposure has been reported to increase bronchial reactivity to histamine in asthmatics. Objective biomarker of exposure tobacco have been identified. Plasma cotinine was the marker of choice. Influence of passive smoking on pulmonary tests has also been examined and functional disorders of bronchioles have been detected. **Aim:** The aim of the present study is to educate about the passive smoking and to examine the knowledge about passive smoking among the various groups of people.

Objectives:

- Identification of the main sources of exposure.

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FORMULATION DEVELOPMENT AND IN-VITRO EVELUATION OF BUCCAL TABLETS OF BENIDIPINE HCL TABLET

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ABSTRACT

The aim of the present study was formulation development and in-vitro evaluation of benidipine hydrochloride tablet of strength 4 mg. Direct compression technique was chosen to develop a finished pharmaceutical product. Various formulations (F1-F8) were taken. In these trials, drug: excipient ratio was varied and the effect of diluents, and various polymers like, HPMC 15 cps as a rate controlling polymer, and Sodium Alginate, Chitosan, Carbopol 940 are as mucoadhesive polymers on the performance tablets was studied.All the formulation has hausner's ratio between the 1.10 to1.18. It indicates all the formulation show better flow property. Among all formulation F7 showed in-vitro drug release 98.9% for 12hrs. And which is showed better release than marketed preparation hence considered as most promising preparation.

KEYWARDS: Benidipine Hydrochloride tablet, HPMC 15 cps as a rate controlling polymer, and Sodium Alginate, Chitosan, Carbopol 940, mannitol, lactose, magnesium stearate, talc.

1. Drug profile: Benidipine hydrochlorideis a new calcium channel blocker of the dihydropyridine type. It is used as antihypertensive and antianginal agent. It is not official in any Pharmacopoeia.

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EVAUATION OF ANTIMICROBIAL UTILISATION PATTERNS ACCORDING TO WORLD HEALTH ORGANISATION Aware CLASSIFICATION IN A MULTI- SPECIALTY HOSPITAL

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Abstract :
INTRODUCTION: - Inappropriate use of antibiotics has become one of the biggest drivers for antimicrobial resistance [AMR] which has become an expanding public health warning. To improve the usage of antimicrobials, the World Health Organization grouped antibiotics into three categories which include Access, Watch, Reserve group antibiotics [AWaRe]. The compulsion of WHO is that Access group of antibiotics should be widely used and at low cost and to reduce the usage of watch and reserve groups of Antibiotics. Combination of factors such as changing prescribing practices, increasing AMR to other antibiotics classes and lack of availability of first line penicillin antibiotics included in Access groups could lead to the increasing usage of second and third generation cephalosporins of Watch group.
OBJECTIVES: - The Purpose of this study is to evaluate the pattern of antibiotic consumption in patients admitted in different departments according to WHO AWaRe group classification and The Secondary objective is to find out the Medication Errors such as wrong dose, wrong dosage form, wrong route of administration and potential drug interactions caused due to prescribed antibiotics.
METHODOLOGY: - A prospective observational study was conducted over a period of six months at Star multispecialty hospital, Hyderabad. The study was conducted to evaluate the use of antibiotics according to WHO AWaRe group classification. Total 150 prescriptions were analyzed for antibiotic consumption in inpatient departments of hospital.
RESULTS: - In our study we evaluated the overall antibiotic consumption pattern and found that the share of Access, Watch and Reserve group were 24.66%, 68.02% and 5.96% respectively. In our study we observed that the antimicrobial consumption pattern changed drastically without culture test and after culture. It was found that without the culture test Access group were 27.94% Watch group were 69.23%, Reserve group were 2.43% and Unclassified were 0.40% while after culture test the share of Access group changed to 18.03%, Watch group changed to 65.57%, Reserve group changed to 13.11% and Unclassified to 3.28% respectively.

KEYWORDS: Antimicrobial resistance, Essential Medicine List, Empirical therapy, Medication errors, Drug interaction

I. INTRODUCTION:

WHO AWARE CLASSIFICATION

WHO has divided antibiotics into three groups namely: Access, Watch, Reserve group

- **Access** – antibiotics that represent first or second-line for empirical treatment of common infectious syndromes based on a systematic assessment of the available lab data and other factors and that have a good safety profile with a low resistance potential. All access antibiotics are part of the Essential medicine list, that is these antibiotics should be widely available in all settings (while still making efforts to ensure their appropriate use). many penicillins belong to this class.
  Examples include: - penicillins, first and second generation cephalosporins, doxycycline, clindamycin etc.
- **Watch** – antibiotics that present a higher resistant potential that negatively impact Anti microbial resistance. some watch group antibiotics are also included in the eml core list since they are the most effective options for a limited group of well-defined clinical syndromes, but their use should be tightly monitored and restricted to the limited indications. fluoroquinolones, which are unfortunately commonly used in many settings, belong to the watch group as their use should be avoided for indications for which they are no longer first or second choice.
  Examples include: - third and fourth generation cephalosporins.
- **Reserve** – "last-resort" antibiotics, that have activity against multi (Mdr))- or extensively (Xdr) resistant bacteria, and their use should become accessible but tailored to highly specific patients and, in those situations, where all alternatives have failed to work. Examples include: - carbapenems, linezolid, colistin etc. [12,13,14]

II. METHODOLOGY

Study site:
Multispecialty Hospital (Star Hospitals, Banjara Hills, Hyderabad)
Study Design: It is a Prospective Observational Study

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HORMONAL IMBALANCES: A CATASTROPHE TO HUMAN BIOLOGY

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ABSTRACT

The endocrine system is an essential part of the human biology. Its functions have been known since ancient times and proof of that is in the spiritual chakra system where each chakra corresponds to the endocrine gland in that location. However, hormonal health has been neglected in current medical practice due to limited knowledge of the role of hormones which is why many major groups of society are suffering from endocrine related disorders. One of these disorders which would be dangerous to ignore would be PCOD [Polycystic Ovarian Disease] or now known as PCOS [Polycystic ovary syndrome]. 1 in 10 women of childbearing age is affected by PCOS which can problems such as amenorrhea/ oligo menorrhea / hyper menorrhea, and ultimately fertility problems where the woman is unable to conceive. Men are also suffering from problems such as difficulty with ejaculation, difficulty maintaining an erection (erectile dysfunction), low sperm count, undescended testicles (even when age of puberty has been reached), and abnormal breast growth (gynecomastia). There has been a recent surge in these problems world-wide due to an increase in usage of artificial hormones and GMOs in processed food along with industrial pollutants which are being used on a large scale which are wreaking havoc on the human biology.

Keywords: PCOS, PCOD, Endocrine system , Fertility , Sexual health , Animal hormones ,Industrial toxins ,Naturopathy, Men's sexual health, Erectile Dysfunction

INTRODUCTION

In this article we would like to address:

1. What is PCOS?
2. What are the causes of PCOS?
3. What are the hormonal problems faced by men?
4. Harmful hormones being used in industries.
5. How to treat/prevent hormonal disruption through diet and lifestyle.

Polycystic Ovarian Syndrome:

PCOS is defined as a combination of signs and symptoms of androgen excess and ovarian dysfunction in the absence of other specific diagnoses. [1] The reproductive features of PCOS include increased androgen production and disordered gonadotropin (hormones secreted by pituitary gland) secretion leading to menstrual irregularity, hirsutism, and infertility.

Women with PCOS usually have at least two of the following three conditions: [2]

- Absence of ovulation, leading to irregular menstrual periods or no periods at all
- High levels of androgens (a hormone which mostly affects male fertility) or signs of high androgens, such as having excess body or facial hair
- Cysts (fluid-filled sacs) on one or both ovaries—"polycystic" which means "having many cysts"
- PCOS is the most common cause of anovulatory infertility, meaning that the infertility results from the absence of ovulation (the process that releases a mature egg from the ovary every month). Many women do not know that they have PCOS until they have trouble conceiving.

PCOS can cause other problems as well, such as unwanted hair growth, dark patches of skin, acne, weight gain, and irregular bleeding.

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HERBAL MEDICINE: FINDING TRADITIONAL WAYS FOR MODERN PROBLEMS (COVID-19)

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ABSTRACT

Traditional medicine [also known as indigenous or folk medicine] comprises medical aspects of traditional knowledge that developed over generations within various societies before the era of modern science. The WHO defines traditional medicine as " the sum total of the knowledge, skills and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether applicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness. World community is facing an unprecedented pandemic of novel corona virus disease[COVID-19] caused by Severe Acute Respiratory Syndrome Corona virus 2 [SARS-COV-2]. The disease has spread globally. The dimensions of pandemic require an urgent harnessing of all knowledge systems available globally. Utilization of Traditional Chinese Medicine in Wuhan to treat COVID-19 cases sets the example demonstrating the traditional health care can contribute to the treatment of these patients successfully. Notwithstanding the fact that no system of medicine has any evidence based treatment for COVID-19 as yet, clinical interventions are required to be put in place. Therefore, Traditional drugs could be implemented and be used in the treatment of COVID-19.

Keywords: Traditional Medicine, COVID-19, SARS-COV-2, Pandemic, TCM.

INTRODUCTION

Corona virus is a large family of enveloped, positive-sense, single strand RNA virus that infect a broad range of vertebrates. They are extensive in bats. The origin of SARS-COV-2 remains unclear. Bats are considered the original source of SARS-COV-2. The spike proteins in the virus will bind to ACE-2, these are located majorly in bronchioles and the other sites such as oral cavity, taste buds and tongue. Vaccines or drugs that specifically target SARS-COV-2 are lacking.

Mechanism of receptor recognition by SARS-COV-2

Spike protein mediates the entry of virus into the host cells. Spike protein of corona virus contain a receptor binding domain [RBD] that recognizes the ACE-2 as its receptor. Receptor binding domain contains core and RBM, and this mediates the contact with ACE-2. The surface of ACE-2 contains 2 virus binding spots. Several RBM surround these spots and regulate infectivity. Pathogenesis is by human-human transmissions. These SARS-COV-2 virus infected people in 2001-2003 and now corona virus are similar to each other. Several residue changes in SARS-COV-2 RBM stabilize 2 virus binding hotspots which increase the affinity of ACE-2 to bind more. The RATG13, a bat COV that is closely related to SARS-COV-2 also uses human ACE-2 as it's receptor.

Location and Distribution of ACE-2

Where the ACE-2 present in the body, there the virus will bind. High ACE-2 is identified in Type II alveolar cells of lungs, esophageal upper and stratified epithelilal cells, absorptive enterocytes from ileum and colon, cholangiocytes, myocardial cells, kidney proximal tubule cells, bladder urothelial cells, these organs are

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