

CORONAVIRUS: TO STUDY THE VARIOUS ASPECTS OF 2019-NCOV (COVID-19)

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ABSTRACT

2019-nCoV is new strain of coronavirus, spread from one person to another. It causes acute respiratory infections, cytokine storm, cold, sneezing, coughing, fever, pneumonia. It travels from person to person through tiny droplets in air. The motive of this review is to review the structure, pathogenesis, causes, preventive measure and treatment. Various antiviral drugs are used to treat the patients. All ages are susceptible. Transmission of infection occurs from patients to patients.

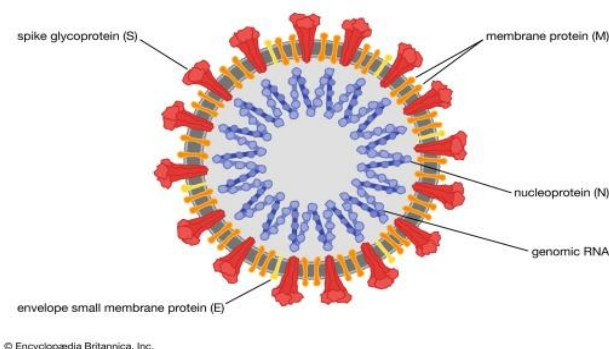
INTRODUCTION

The novel coronavirus is positive sense RNA virus. It has spikes on its surface which look like a crown, named as coronavirus. It infects multiple host species and is associated with acute respiratory infection in

humans.

This new virus was first discovered in 2019 when viral metagenomics was carried out on three bronchoalveolar lavage specimens from Chinese adult patients with unexplained severe pneumonia.

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)



Genom is single stranded RNA and largest virus genome, it can combine genetic recombination from various infected host.

REVIEW OF LITERATURE

- ▶ **Shuo Su, Gary Wong, Weifeng Shi, Jun Liu, Jiyong Zhou *et. al* (June 2016):** This review aim to study the epidemiology, evolution and recombination events resulted in outbreaks.
- ▶ **Fang Li *et. al* (September 2016):**Structure, Function, and Evolution of Coronavirus Spike Proteins.
- ▶ **Ali muddin Humla, Osman Dr, Richard ock etc *et.al* (September 2016):** Human, animal and environmental factor, outbreak response and associated research.
- ▶ **Liang Haixu, Wang Haibin, Ren Li *et.al* (Jan.14 2020):** In this the respiratory problems, health conditions and various risks were reported.
- ▶ **E. Steinmann, D. Todt, G. Kampf, S. Pafender *et.al* (Jan.22.2020):** Various risks, transmission and specific therapies is given
- ▶ **Thug Phan *et. al* (Jan.30.2020) :** Discovery, emergence, genomic characterstics were describe.
- ▶ **Nurcan Duman, Rabia Sarinoglu, Aysegul Karahasan *et. al* (Feb. 2020) :** Infection Cases, Clustering cases, environmental and biological information is provided.
- ▶ **Chunbao Xie, Lingxi Jiang, Guo Hunang, Hong Pu, Yi Shi etc *et. al* (Feb.22.2020) :** Virus detection, manifestation, investigational therapies, current treatments.
- ▶ **Wenjie Yang, Qiqi Caco, Le Qin, Ashan Pan, Fuhua Yan etc. *et. al* (March 2020) :** Clinical Characterstics, tests, preventive measures, collection samples and detection
- ▶ **Kun Chen, Xuqin Kang, Jinjun Zhang, Luxi Zhang *et. al* (March 2020) :** Information on demographic, epidemologic, clinical, and cluster case and outcome obtained.
- ▶ **Xue Ye, Huan Zhou *et.* (April 2020) al:** Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease
- ▶ **Tanu Singhal *et. al*:** Outbreak of virus and spread of virus.
- ▶ Literature for this review was identified by searching the following online databases: Webmed, Google scholar, PubMed etc.

Causes and Preventive Measures

Flu, Cough, Pneumonia, Respiratory infections can causes coronavirus. One should follow preventive measures like, Keep away from someone with heavy, Washing hands, covering mouth while coughing, sneezing.

Treatments

Ivermectin: It is an antiparasitic drug belonging to class of drugs known as antihelmintics. It works by binding to the structure of a parasite, inhibiting it from producinng larvae, before eventually paralysing and killing it completely.

Doxycycline: It is an antibiotic which treat the flu and common cold.

Prazosin: It is an alpha – blocker that relaxes blood vessels, and reduce blood pessure, it is known to target an inflammatory response of body known as Cytokine Strom Syndrome- which is found to be a main reaason of death among patients.

Antibody treatment: A new antibody that could become effective treatment, it can stops virus from infecting healthy cells by targeting protein spikes.

Lopinavir-Ritonavir: The combination of these drugs used with other drugs to treat HIV. They are protease inhibitor therefore it disrupt the process of viral replication and release from host cells

Remdesivir: It was originally identified as a broad spectrum polymerase inhibitor against a number of deadly RNA viruses, although not originally designed for coronaviruses, the drug shows highest antiviral activity.

Covaxin: Phase 1 and Phase 2 Clinical trials shon the ability to produce antibodies against Covid-19. It contains aluminium hydroxide gel, imidazoquinolinone 2-phenoxyethanol and phosphate buffer saline which can inactivte/kill the virus.

CONCLUSION

A study on the transmission dynamic of virus which cause illness from flu to sever infections. Early detection and rapid confirmation for prevention. The review shows the outbreak of pandemic, its severity, symptoms, causes and preventive measures. Various drugs are use in treatment. The study explore treatments and prevention and need of urgently decrease the impact of pandemic.

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