Review Article

Corona Virus Disease (COVID-19) An Overview

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INTRODUCTION

The Corona Virus Disease (COVID 19) outbreak first reported in Wuhan, China, was identified on November, 17, 2020 and was declared as Public Health Emergency of International Concern by World Health Organisation on January 30, 2020. The outbreak evolved rapidly into the public health crisis and the spread was found to be exponential to the other parts of the world. Corona virus (SARS-CoV-2) also known as Novel Corona Virus causing the respiratory infection was first reported in India on January 30, 2020.

Transmission and Survival of Virus:

Novel Corona Virus has similarity to the corona virus found in bats confirming the zoonotic nature of this new cross-species viral-mediated disease thus possibly leading to human transmission. SARS CoV2 is the single stranded RNA virus known as Coronaviridae. SARS CoV2 binding to human angiotensin converting enzyme 2 receptors, are found concentrated in salivary glands. Therefore, once gaining entry into the body, the virus captures nasopharyngeal and salivary secretions of the affected patients as the reservoir for its survival. The human to human transmission was predominantly thought to be respiratory droplets /Contact in nature. COVID 19 infection may lead to intestinal infection and be present in faeces as well.[1, 2]

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Clinical Presentation:

The SARS CoV-2 have an incubation period of 2-14 days after exposure, mostly within 5 days after exposure clinically presents fever(low grade) in 83-98%, fatigue(70%), dry cough(59%). Most of the cases are of mild infection (80%) with a usual recovery period of 2 weeks; only 15% and 5% of cases are of severe and critical nature respectively. The disease begins with fever and dry cough and progresses to dyspnea and ARDS. Most common complications are bilateral pneumonia progressing to ARDS, sepsis and septic shock.[3] The probability of lethality due to Novel Corona Virus is more in patients with low immunity status or patients having co-morbidities such as diabetes mellitus, chronic kidney disease, transplantation, cancer chemotherapy, malnutrition, cardiac disease. Extremes of age are highly susceptible for COVID 19 infection and found to have an overall mortality rate as high as 3.4%.The Throat and Nasal Swab sample for COVID 19 infection are collected in Viral Transport Media and sent to laboratory at 2-8°C and the preferred diagnostic testing modality used for detecting SARS CoV-2 is Real Time Polymerase Chain Reaction (RT- PCR).

Prevention and Treatment:

Neither vaccine, nor medication for treatment of COVID-19 infection have been found till now. Symptomatic and supportive treatment is the only option available for the management of patients with COVID-19 infection currently. Oxygen therapy, cautious intravenous fluid infusion with life support, is given in patients with SARI (Severe Acute Respiratory Illness) when Partial pressure of Oxygen ≤ 100 mmHg with PEEP (Positive End Expiratory Pressure) ≥5 cm H_2O, or no ventilated. In addition, empiric antimicrobials can be given to treat all likely pathogens causing SARI. A combination of lopinavir and ritonavir, combination of remdesivir and chloroquine, neuraminidase inhibitors, DNA synthesis inhibitors may be effective to treat COVID-19 disease. The broad range of spectrum antibiotics may be used to control the additional bacterial infection after a virus attack. The US FDA has issued emergency authorization for the use of chloroquine and hydroxychloroquine for the treatment of COVID. The adjunctive therapies including azithromycin, ascorbic acid, corticosteroids, epoprostenol, sirolimus, tocilizumab, sarilumab, and anakinra can be used. Dexamethasone has demonstrated utility on ARDS by decreasing ventilator days and mortality on severe ARDS in patients without COVID-19. Convalescent plasma can be used prophylactically and for already infected patients to attenuate clinical severity[4]. There is still a lack of evidence regarding the safety and effectiveness of these treatment modalities in treating COVID-19. In this regard, clinicians and patients should be made aware of the risk versus benefit profile of any treatment modality used. The understanding of prevention is most important in such pandemic situations. Preventive measures include frequent hand washing,

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refraining from excessive outdoor activities unless an emergency, and avoiding infected individuals, crowded places and public gatherings.

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