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Review Article

Review on Novel Coronavirus (nCoV-19): Defensive Measures and Natural Medicine

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Abstract

Today, the wide epidemic and most significant health issue is the COVID-19(coronavirus disease-19), which affected 218 countries to date (Nov 30th, 2020) around the world. This review paper explores the probable risks and suitable defensive measures with various bio-pharmacy and technological strategies. And also present the statistical analysis of the fatality rate about age and sex and the growth rate in India. This may exhibit a significant path for alleviating the patient number, and the proliferation rate of the contagious diseases well before vaccines and effective medications are identified.

Keywords: COVID-19, SARS, MERS, Natural Medicine

Introduction

COVID-19 is China's new viral disease caused by the SARS-CoV-2 virus, which began in Wuhan City [1].In February 2020, the WHO (World Health Organization) named this novel coronavirus (nCOV) disease as "COVID-19"[3]. Here "Co" stands for "Corona," "vi" stands for "Virus," and "d" stands for "Disease," and "19" is its year of recognition. The corona epidemic was started on December 31st, 2019[4]. According to WHO, this newly originated coronavirus (nCoV) is the worldwide burden that not identified earlier in humans and COVID-19 eventually spread globally in East Asia, the Middle East, and Europe. The International Committee on Taxonomy of Viruses (ICTV) acknowledged this scrupulous coronavirus thought of as "severe acute respiratory coronavirus of type two" or SARS-CoV-2[5]. These viruses usually exist in animals, but in an atypical situation, they transmit to humans. The spikes protruding from the membrane of the virus, as shown in figure-1(b) looks similar to the sun's corona, hence the name titled as 'coronavirus.' Coronaviruses (CoV) related to the class of corona with a high mutation rate from the family of Coronaviridae and Nidovirales[5,6]. The physical appearance and various parts of the novel coronavirus (nCoV-19) are shown in figure 1(a)to 1(c).

CoVs classified as four groups, and they are α, β, γ, and δ-coronaviruses. α and β viruses purely transmit a disease to mammals, whereas γ and δ-viruses, for the most part, infect birds with the minority infecting mammals. But human CoVsinclude α-(229E and NL63) and β-coronaviruses (OC43 and HKU1). The Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS), nCoV-19 also related to β-coronaviruses [7]. These viruses include bat-SARS-like (SL)-CoVZC45, bat-SL-CoVZXC21, SARS-CoV, 6MERS-CoV, and 2019-nCoV. The existing analysis discovered that 2019-nCoV might originate from wild animals, but the exact origin remains unclear.

COVID-19- Fatality with age

This analysis is the prime study to analytically determine the impact of COVID-19 on the band of age groups. The cyclic surveys have noticed that aged people may tend to die after infection. It reminds the ordinary people to be more cautious in taking care of older people from the virus. This study gives clear evidence of a relationship between disease severity and age [8-11]. The clinical characteristics and outcomes of corona affected patients were strongly interrelated to the different age groups, as shown in Figure-2.

The first Covid-19 case was reported in India after five months of its origin. According to Indian government analysis, death reports until July 2nd, 2020 indicates that just slightly less than half of them have happened in young people — those below 60 years of age. In 43% of the deaths, there have been unknown comorbidities.This survey and analysis have been done by the Integrated Disease Surveillance Programme, which functions under the Ministry of Health and Family Welfare (MoHFW). It

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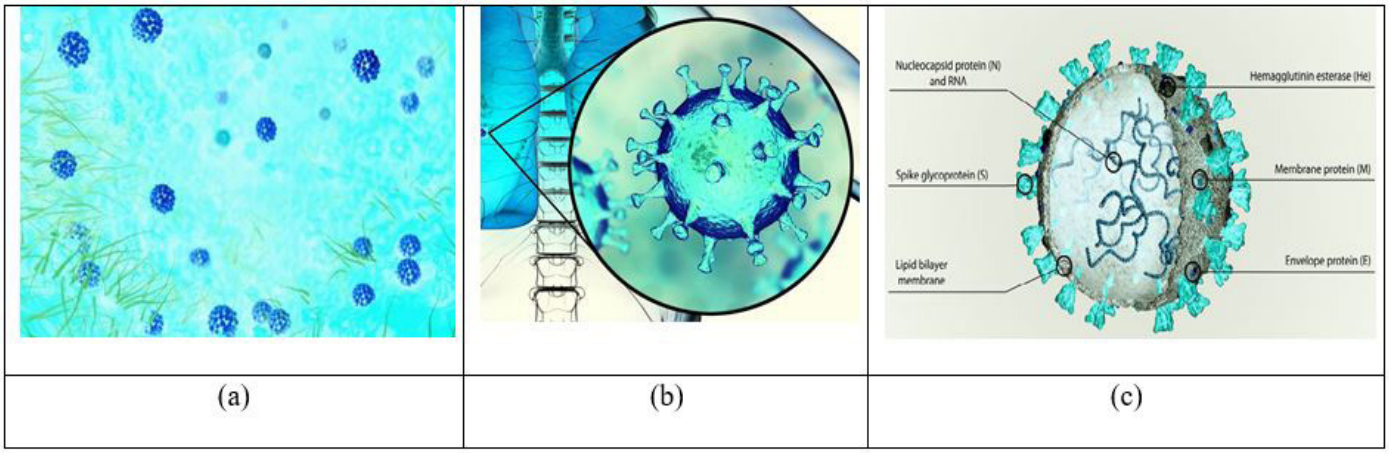

Figure 1: The physical appearance of novel coronavirus (a) Micro-sized virus particles in air medium (b) presence of coronavirus in lungs - deep scanned image (c)Complete structure with denoting various parts of coronavirus

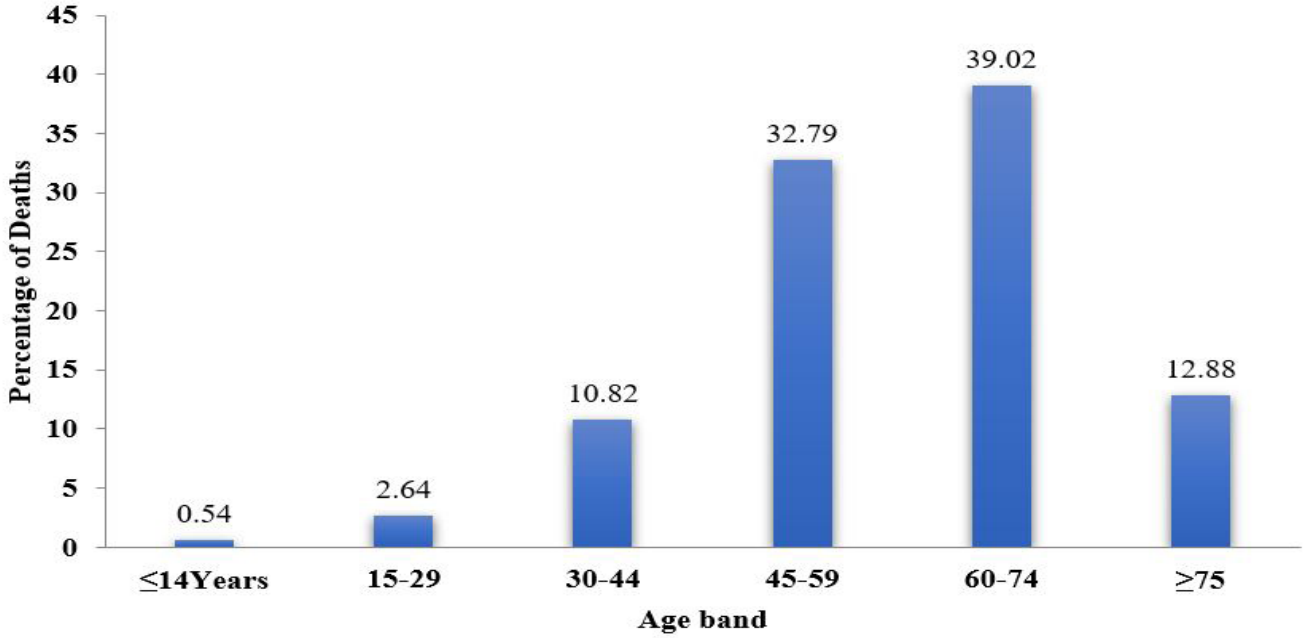

Figure 2: Percentage of deaths according to Age groups until Mar 10th, 2021

Table 1: Effect of COVID-19 on Different age groups, percentage of share in total population till March 31st, 2021

Age in Years	Percentage of share in total population	Percentage of share in all COVID-19 deaths up to March 30th 2021	
		Till May 21st	Till March 30th
<=14	35	0.5	1
15-29	18	2.5	3
30-44	22	11.4	11
45-59	15	35.1	36
60-74	8	40.2	39
>=75	2	10.3	14

has the responsibility to track all viral diseases within the country of India. While all the 17,834 deaths recorded until July was analyzed, comorbidity and age group data were available only for 15,962 deaths as three states [12,13]. The earlier authenticated data about the mortality profiles was officially given on May 21st, 2020. At that time, deaths with comorbidities stood at 73%, with registered cases as 1.12Lakh.

COVID-19 Fatality rate by sex:

While the statistical analysis revealed that men are more susceptible to dying from COVID-19 than women globally. But an analysis of case fatalities in India suggests that females may have a higher relative risk of COVID-19 mortality within the country, but the reasons are unclear so far[14].

In a recent study, Indian women who effected with COVID-19 are at higher risk of dying than men, as per statistics until Nov 30th , 2020 has found-3.30% of infected women died compared to 2.90% of men shown in figure 3.

Causes of a high growth rate

nCoV-19 infected people are significant sources of further propagation of disease. However, we must always append consequences to asymptomatic cases, which may play a significant role in the spread of viruses [15]. Respiratory droplets and physical contact are the main propagation routes. Close connections of friends and relations with symptomatic and asymptomatic cases with silent infections are the most dangerous transmission routes of 2019-nCoV. People with irrespective of the age group are vulnerable to 2019-nCoV [16]. Adults with age group >45 years and other people who have chronic medical conditions, together with cardiovascular diseases, lung disease, diabetes, cancer, and hypertension, are at higher risk for more COVID-19 severe illness and death. This is all often

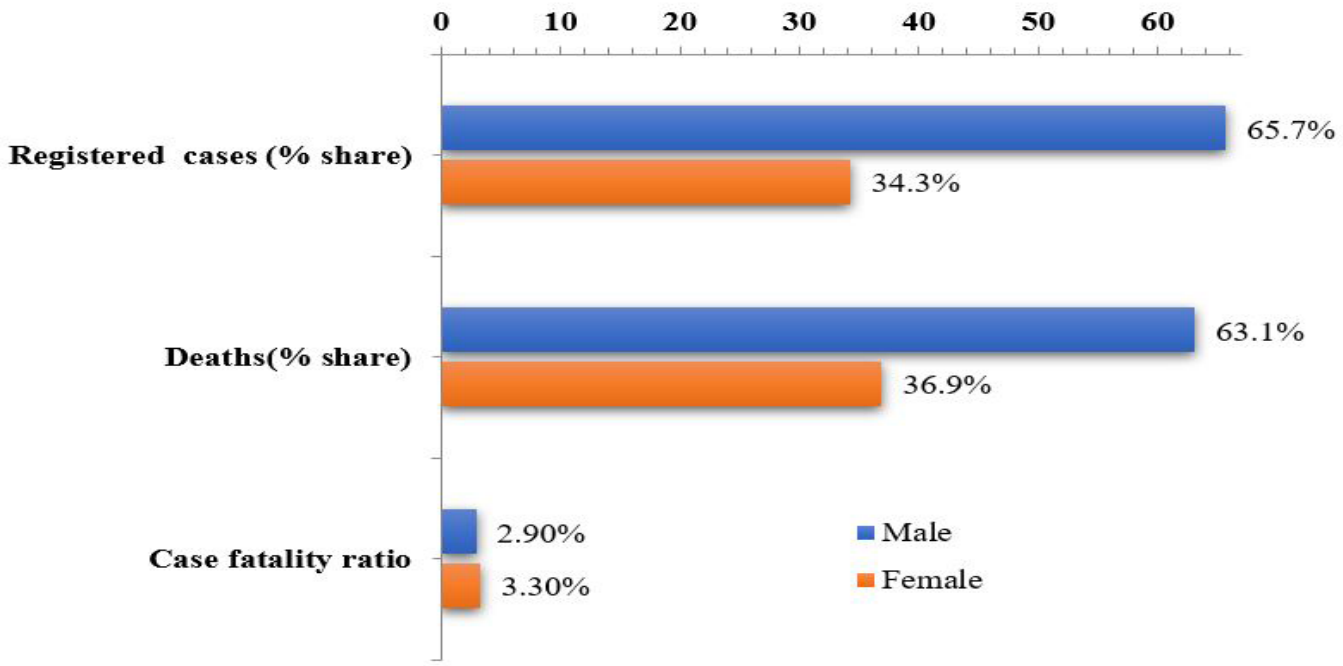

Figure3: More men have a COVID-19 but women at higher risk of death from the statistics up to Nov 30th, 2020, in India

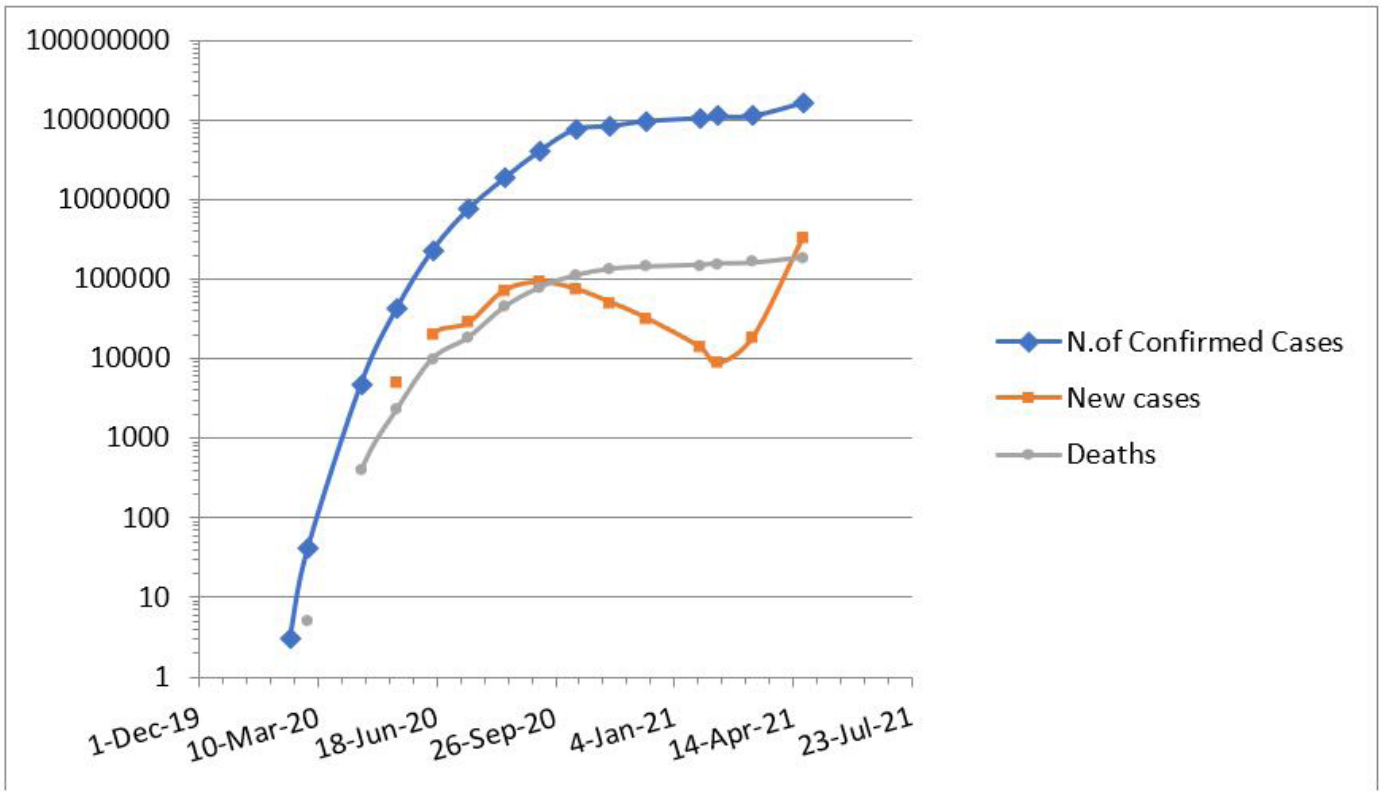

Figure 4: The growth rate of COVID-19 in India

because our immune systems grow weaker as we age, which makes it more challenging for adults to drive back infectious diseases [17,18]. Chronic diseases are more accustomed to age, can compromise the immune system, and make people more predisposed to severe complications. Since the rapid propagation of COVID-19, the CDC recently issued a caution for people who are at a higher risk for severe illness from the virus. It is vital to older adults and others who are at higher risk to take note of the recommendation of the CDC [19,20]. Below figure - 4 shows growth rate of number of confirmed cases in india meets a peak of 93,199 in the month of September. Because of its high mutation rate, virus effect decresed form month of October and recent confirmed cases were 37,396 according to statistics.

The Virus is Mutated:

The reason behind the more significant growth of COVID-19 is its mutation rate[21]. A new study confirms that the coronavirus has mutated and infects humans in 2 versions as L and S types. The L type virus is more aggressive than the S type virus. The S type variant is that the most original version of the virus, which first spread in humans. 30% of infections are due to this sort. Therefore, the virus has mutated into type L, which is responsible for 70% of infections. While L-type was

particularly common in the early stages of the Wuhan epidemic, its frequency has decreased since the beginning of January 2020[22]. Scientists are now speculating that the S type frequency will increase. Since the coronavirus has been detected in over 215 countries, there is talk about an enormous epidemic around the world. However, what society has struggled with so far is the fear of infection [23].

Clinical symptoms and detection techniques

According to nCoV-19-Infection Pneumonia Diagnosis and Treatment Standards (NHC-4th Edition) with other treatment strategies for Coronavirus infections, the clinical symptoms, and detection techniques are listed here [24].

1. nCoV-19 is a kind of β-coronavirus which propagated through bats, leads to dry cough, pneumonia, and fever with a respiratory problem, similar to SARS (2002-2003) and MERS (2012-ongoing).
2. Numerous typical symptoms of these viral infections include fatigue, sputum development, myalgia-pharyngitis, body aches, nausea, nose obstruction, diarrhea, and eyes clogging.
3 Undesirable clinical effects are typically associated with primary health complications among older adults and travelers. Although the diagnosis of nCOV-19 disease in humans may be consistent with their symptoms, and CT-Scan, RT-PCR, ELISA, sample extracted from the nasal cavity is a "gold standard" for validating the disease due to virus.
4 Corona viral disease epidemics not only transpire through the infected person, and there is a possibility of spreading disease by the ongoing community
5 From an epidemiological point of view, the evaluation of various ways of propagation, replica intermission, and experimental field of corona disease may have a significant responsibility to play in preventing its occurrence in the communities. So far, no medical treatment to prevent this viral disease has been investigated during this short period.

Possible Defensive Measures:

There is, therefore, a need to implement a few defensive health measures as well as experienced in the use of therapeutic herbs with exceptional antiviral activity in the control of primary complications in patients. Some of the defensive measures to survive during this critical period are given as follows [25,26].

1. The eradication of social gathering in virus-contaminated areas is intended to prevent further propagation of novel coronavirus disease.
2. The best way to minimize the rate of disease is to isolate healthy people as home quarantine, and symptomatic people must be quarantined at specified hospitals and health care centers.
3. Obedience to basic hygiene strategies based on WHO recommendations.
4. Including regular hand washing for 20 seconds with antigerm soapy water, keep away from frequent contact with mouth, nose, and eyes.
5. Carrying of hand disinfectant, spray 70% isopropyl alcohol on contact surfaces, and wear a protective surgical face mask and hand gloves for compelling self- protection requirements.
6. Many β-coronaviruses can become infected with COVID-19 due to nutrient deficiencies. To protect against these kinds of diseases, our human immune system with balanced proteins and vitamin intake can help us to defend against COVID-19 invasions. Vitamin-C plays a crucial role in maintaining the immunity in this respect.
7. It has also been confirmed that increasing the intracellular dose of Zn2+ may well disrupt the reproduction of various types of RNA viruses, like polio, flu and SARS-CoV, and arteritis (EAV). Besides, a wide range of medical plants with known clinical effects in conventional Indian and Chinese medicine to treat the primary essential implications of COVID-19.

Possible prevention measures with natural medicines in controlling COVID-19:

(Ministry of AYUSH recommendations, based on ayurvedic literature and scientific publications for preventive health measures and boosting immunity with particular reference to respiratory health) [27-30].

Tapping into age-old insights of Ayurveda during COVID -19 as simple Ayurveda medicines to protecting from SARS-CoV-2 [31].

Nasal Applications

Apply sesame oil or coconut oil or cow ghee in both the nostrils in the morning and evening.

Oil Pulling Therapy

Swish your mouth with 1tsp sesame or coconut oil for 2-3 minutes and spit it off followed by warm water rinse (Twice a day)

For a dry cough or sore throat

Practice steam inhalation with fresh mint leaves or caraway (once a day) take clove powder mixed with honey (2-3 times a day)

Immunity enhancing techniques

Take chavanprash (Mixed fruit paste having enriched Vitamin-C) of 10mg in the morning, people with diabetes should take sugar-free chavanprash.

Drink herbal tea/decoction made from Basil, Cinnamon, Black pepper, Dry ginger, Raisin –once or twice daily. Add natural sugar lemon juice to your taste, if needed

Golden milk-half teaspoon, Turmeric powder in 150ml hot milk-once or twice a day

Drink warm water throughout every day.

Daily practice of yogasana, pranayama, and garlic recommended in cooking.

Resonance frequency therapy (RFT):

According to Dykeman et al. [19], all substances have some resonant frequencies at which they naturally oscillate. Viruses are also disposed to the similar kind of mechanical excitation. After a specific resonance value, the virus crust is compromised due to increased mechanical vibrations, leading to the debilitation and damage of specific genomic materials with which the resonance frequency matches [32].

Kill viruses by mechanical resonance in their DNA strand or receptor binding site of SARS-CoV-2 virus by mechanically damaging the sites and thus rendering them ineffective to plug with healthy human cells.

The calculations of the therapeutic frequencies of novel Coronavirus is based on the method of researcher Boehm [33] (U.S. Patent no. 7,280,874 B2, dated October 9th, 2007). The author reported the success of in-vitro and in-vivo tests of diseases in humans. According to the author's claims, the therapeutic frequency determined by the author's technique was successful in treating some people.

On the guidelines of the above method, specific audio frequencies are proposed based on the size and molecular weight of the Receptor Binding Domain (RBD) of the SARS-CoV-2 (novel Coronavirus). This actively binds with the human ACE2 receptor [34]. If the receptor-binding domain of the above-stated virus can be modified/damaged with the utilization of resonance

pulsation through audio frequency, then the virus is going to be rendered useless. Please note, in line with the literature, this audio frequency will target only the specific receptor/ spike protein of the novel Coronavirus without harming healthy cells. The frequency, which is in the audio range, was calculated to be 174.989 Hz (approx.). Alternatively, it supported the length of the RNA of the SARS-CoV-2 (novel Coronavirus) virus, which is 30 kb. The therapeutic resonant frequency was calculated to be 171.160 Hz (approx.) [35-37].

Psoriasis injection Okayed for limited use to treat Covid-19 patients: Drug controller:

India's drug regulator has approved Itolizumab; this drug used to cure skin disease "psoriasis" for "restricted emergency use" to take care of COVID-19 patients with moderate to severe acute respiratory distress. Itolizumab, and previously approved drug of Biocon, for restricted emergency use for the treatment of 'cytokine' release syndrome in moderate to severe acute respiratory distress syndrome patients of COVID-19. The approval was given after its clinical trials on COVID-19 patients in India were found satisfactory. The Involved expert committee comprising pulmonologists, pharmacologists, and medical experts from AIIMS [38,39].

In summary, these non-specific antiviral therapies, in addition to complying with the benchmark health regulations suggested by the WHO, can effectively support people's health affected by the outbreak of COVID-19. Despite the consequences of age, there are some safety measures that all should take: regular hand cleaning with sanitizers, avoid unnecessary long travels and enormous group gathering, and sanitize commonly used objects. Among the critical steps, the people with age more than 60 can stay away from infants and young people. Even people don't have symptoms but still infectious, so everyone needs to maintain social distance, which is the best solution to avoid further propagation of any viral disease.

Conclusion

The unexpected epidemic COVID-19 in China and consequent stretch everywhere the world have taken the shape of a deadly disease. With virus scattering at a tremendous rate, Infected over 9,593,688 and died more than 1,39,473 as on December 3rd,2020 around the India. Still, there is no vaccine and a proper cure for COVID-19. Under this pandemic situation, all feasible defensive measures and residential remedies help us to survive until the availability of medicine and few useful surviving techniques are presented here.

The fatality rate of COVID-19 in India concerning age and sex, reasons behind the vast rate of growth in registered cases, and deaths are reviewed. From the analysis, elderly persons were being affected severely by this virus, and the fatality rate increases over the age band of 45-74. But from the profound observation, in conjunction with time recovery rate tend to decrease, and therefore the death rate increases dramatically from the July 5th, 2020 onwards.

And also, the resonance frequency technique is one among the potential methods, as it has verified its efficiency against targeted destruction of few viruses may applicable to coronavirus particle destruction. As treating a considerable number of individuals in hospitals, it becomes challenging and more number of population is under quarantine, a resonance audio frequency of this sort if placed in public spaces and homes might help an excellent deal.

List of abbrivations:

nCoV-19- Novel Corona Virus-2019
COVID-19- Corona Virus Disease 2019
SARS-CoV-2:-Severe Accute Resipiratory Syndrome Corona Virus Type -2
WHO- World Health Organization
ICTV- International Committee on Taxonomy of Viruses
MoHFW- Ministry of Health and Family Welfare
CDC- Center for Diseases Control
MERS-Meddile East Resipiratory Syndrome
CT-Scan –Computed Tomography Scan
RT-PCR –Reverse Transcription Polymerase Chain Reaction
ELISA-Enzyme Linked Immunobsorbent Assay
RBD-Receptor Binding Domain
AIIMS- All India Institute of Medical Sciences

Declarations

Not Applicable in the section

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