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Review Article

Analysis of Immunity System for Survival of COVID-19

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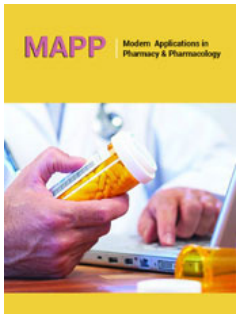

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Abstract

(COVID-19) Corona virus towards the end of 2019, an invisible virus pneumonia outbreak occurred in Wuhan (Hubei, China) due to an unknown reason caused by the severe acute respiratory syndrome coronavirus. The virus is expressed in the form of a series of virus's pneumonia (COVID-19). In January 2020, it was first appeared in human body in the form of severe acute respiratory syndrome coronavirus (SARS-CoV), then in the Middle East in the form of respiratory syndrome coronavirus (MERS-CoV) and in the outer population as (SARS-CoV-2). On February 11, 2020, the Honorable Director General of the World Health Organization (WHO) Dr. Tedros Adhanom Ghebreyesus SARS-CoV-2 named the disease "COVID-19". The situation was later declared the pandemic by the WHO on March 20, 2020, when the number of affected countries exceeded a hundred, with more than 100,000 cases detected and more than 4,000 deaths. Corona virus disease 2019 (COVID-19) is an RNA virus and together with a regular crown-like appearance as it lies under an electron microscope whose cover corresponds to the emergence of glycoprotein spikes. The corona virus has now become an epidemic worldwide. It has spread all over the world, started first in China, then in Arabia, Italy, Spain, the United States and Bangladesh. Every moment of which seems to be singing the slogan of death and the number of deaths is increasing. In this review, we provide a brief introduction to the general characteristics of SARS-CoV-2 and discuss current knowledge of immune pathogenesis based on current perceptions of SARS-CoV and MERS-CoV infections, diagnosis, prevention and treatment of SOVID-19, which may be helpful in offering novel insights and potential therapeutic targets for fighting against the SARS-CoV-2 infection.

Keywords: Immunity; Survival; Covid-19

Introduction

Late 2019, the Novel Corona Virus - Revealed Pneumonia, which was named by the WHO as Coronavirus Disease (COVID-19). 11th February 2020, infecting from the very beginning on the pandemic scale that increased rapidly. The virus first appeared in Wuhan, China and virus were first identified on November 17, 2019 [1]. The Novel Corona Virus, according to the International Virus Analysis Agency, was classified as the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) [2].

Currently, the covid-19 virus has reached all countries in the world [3]. Confirmed in China, as of March 2, 2020, the virus had infected more than 80,000 confirmed patients with COVID-19, leaving more than 40,000 patients recovered and more than 3,000 dead. The World Health Organization (WHO) announced that COVID-19 was listed as a Public Health Emergency of International Concern (PHEIC), meaning it could pose a risk to multiple countries and require a coordinated international response. And the first patient infected with corona virus was identified in Bangladesh on March 8, 2020. According to the latest data from Bangladesh, as of April 20, 2020, there were 2,946 patients infected with COVID-19, 101 deaths and 85 recovery cases. Bangladesh with fever, cough and shortness of breath. Bangladesh's 50-day corona virus report is given in the following Figure 1 and Comparison Report Figures 2 & 3. Observing this number, the World Health Organization has listed Bangladesh as the most at risk and called for raising awareness.

Date	Test	Total Test	Positive	Total Positive	Death	Total Deaths	Recover	Total Recover	Active Cases	Death Rate	Recovery Rate
4-Mar-2020	108	108	0	0	0	0	0	0	0	0.00	0.00
5-Mar-2020	3	111	0	0	0	0	0	0	0	0.00	0.00
6-Mar-2020	0	111	0	0	0	0	0	0	0	0.00	0.00
7-Mar-2020	9	120	0	0	0	0	0	0	0	0.00	0.00
8-Mar-2020	7	127	3	3	0	0	0	0	3	0.00	0.00
9-Mar-2020	10	137	0	3	0	0	0	0	3	0.00	0.00
10-Mar-2020	10	147	0	3	0	0	0	0	3	0.00	0.00
11-Mar-2020	16	163	0	3	0	0	0	0	3	0.00	0.00
12-Mar-2020	24	187	0	3	0	0	2	2	1	0.00	200.00
13-Mar-2020	24	211	0	3	0	0	0	2	1	0.00	200.00
14-Mar-2020	30	241	0	3	0	0	0	2	1	0.00	200.00
15-Mar-2020	27	268	2	5	0	0	0	2	3	0.00	66.67
16-Mar-2020	25	293	3	8	0	0	0	2	6	0.00	33.33
17-Mar-2020	49	342	0	8	0	0	1	3	5	0.00	60.00
18-Mar-2020	39	381	0	8	1	1	0	3	4	25.00	75.00
19-Mar-2020	46	427	2	10	0	1	0	3	6	16.67	50.00
20-Mar-2020	36	463	7	17	0	1	0	3	13	7.69	23.08
21-Mar-2020	36	499	7	24	1	2	0	3	19	10.53	15.79
22-Mar-2020	65	564	3	27	0	2	0	3	22	9.09	13.64
23-Mar-2020	56	620	6	33	1	3	2	5	25	12.00	20.00
24-Mar-2020	92	712	6	39	1	4	0	5	30	13.33	16.67
25-Mar-2020	82	794	0	39	1	5	2	7	27	18.52	25.93
26-Mar-2020	126	920	5	44	0	5	4	11	28	17.86	39.29
27-Mar-2020	106	1026	4	48	0	5	0	11	32	15.63	34.38
28-Mar-2020	50	1076	0	48	0	5	4	15	28	17.86	53.57
29-Mar-2020	109	1185	0	48	0	5	0	15	28	17.86	53.57
30-Mar-2020	153	1338	1	49	0	5	4	19	25	20.00	76.00
31-Mar-2020	264	1602	2	51	0	5	6	25	21	23.81	119.05
1-Apr-2020	157	1759	3	54	1	6	0	25	23	26.09	108.70
2-Apr-2020	147	1906	2	56	0	6	0	25	25	24.00	100.00
3-Apr-2020	207	2113	5	61	0	6	1	26	29	20.69	89.66
4-Apr-2020	434	2547	9	70	2	8	4	30	32	25.00	93.75
5-Apr-2020	367	2914	18	88	0	8	0	30	50	16.00	60.00
6-Apr-2020	696	3610	35	123	4	12	3	33	78	15.38	42.31
7-Apr-2020	792	4402	41	164	5	17	0	33	114	14.91	28.95
8-Apr-2020	981	5383	54	218	3	20	0	33	165	12.12	20.00
9-Apr-2020	1097	6480	112	330	1	21	0	33	276	7.61	11.96
10-Apr-2020	1184	7664	94	424	6	27	0	33	364	7.42	9.07
11-Apr-2020	649	8313	58	482	3	30	3	36	416	7.21	8.65
12-Apr-2020	1340	9653	139	621	4	34	3	39	548	6.20	7.12
13-Apr-2020	1570	11223	182	803	5	39	3	42	722	5.40	5.82
14-Apr-2020	1905	13128	209	1012	7	46	0	42	924	4.98	4.55
15-Apr-2020	1740	14868	219	1231	4	50	7	49	1132	4.42	4.33
16-Apr-2020	2135	17003	341	1572	10	60	0	49	1463	4.10	3.35
17-Apr-2020	2190	19193	266	1838	15	75	9	58	1705	4.40	3.40
18-Apr-2020	2114	21307	306	2144	9	84	8	66	1994	4.21	3.31
19-Apr-2020	2634	23941	312	2456	7	91	9	75	2290	3.71	3.05
20-Apr-2020	2779	26720	492	2948	10	101	10	85	2762	3.66	3.08
21-Apr-2020	2974	29694	434	3382	9	110	2	87	3185	3.45	2.73
22-Apr-2020	3096	32790	390	3772	10	120	5	92	3560	3.18	2.44
23-Apr-2020	3416	36206	414	4186	7	127	16	108	3951	3.21	2.73

Figure 1: Corona Virus Report of Bangladesh.

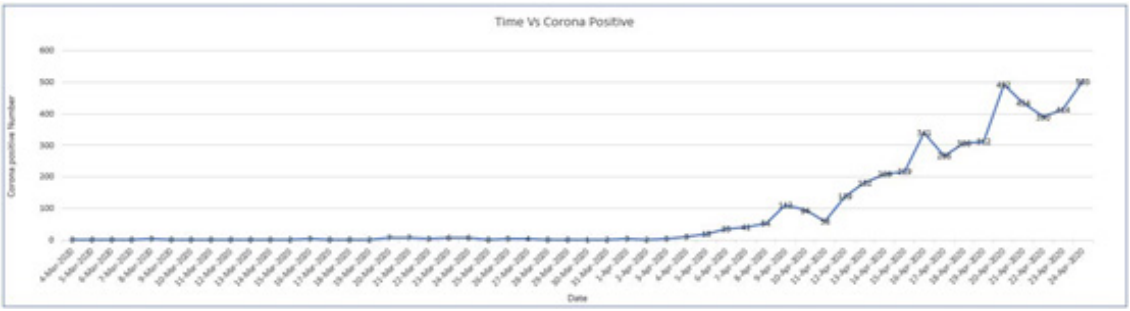

Figure 2: Time vs Corona Positive.

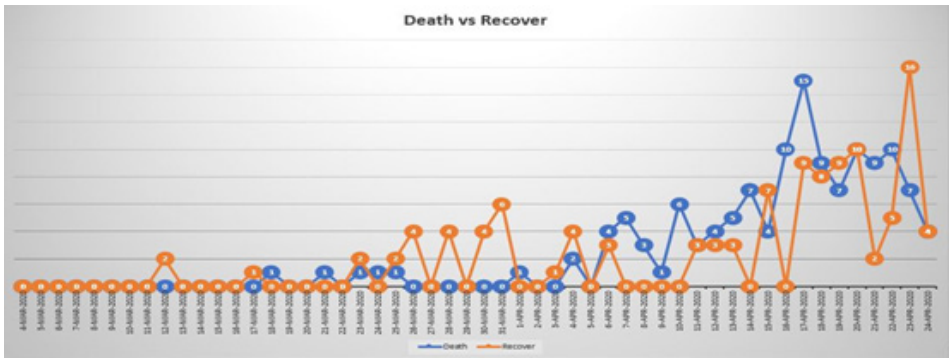

Figure 3: Death vs Recovery.

This is not the first time that the pandemic of corona virus has become a global health threat: in the last moment of 2012, (Guangdong) China and again an outbreak of Severe Acute Respiratory Syndrome (SARS) -CoV virus (CoV) started [4,5]. And after so many years, it reappeared as a novel corona virus. This review paper analyzes the corona virus prevention systems in different countries and how these systems have been successful. In this review paper, the researcher seeks to explain the immune pathogenesis and the diagnosis of COVD-19 through various observations and provides a reference on how to prevent SARS-CoV-2 infections and what ingredients should be used to develop the drug. Disclosure of recent research progress of SARS-CoV-2 and is based on knowledge from a variety of research articles, including SARS-CoV and MERS-CoV [6]. According to a research article in Bangladesh, the government may now publish a list of Hydroxyls (-OH) groups through nutritionists before making drugs [7].

After the first report, the sequence of the virus from isolation to treatment of multiple patients [3]. We will try to compare COVID-19 with SARS and another COV-induced disease syndrome in the Middle East and in this paper, we will discuss corona virus transmission, transmission route, household transmission, Susceptibility, signs, symptoms, virus entry into the human body, immune systems, prevention strategies, vaccine as well as some of the most important questions in corona disease prevention and diagnosis.

Transmission COVID-19 from China

On March 2, 2020, more than 80,000 cases were confirmed to be infected with COVID-19 in 65 territories outside of China, deaths more than 300 people. In addition, significant communities in the Middle East and Italy, were infected. The first patient was identified in Bangladesh on March 8, 2020 and was declared a global pandemic by March 11, 2020 by the WHO [8]. The number of confirmed cases has been steadily rising worldwide on a daily basis, and after Asia and Europe, there has now been a significant increase in the number of cases in low-income countries [9].

In addition, the number of cases and deaths in the United States and Spain increased significantly. Today, as of April 22, 2020, the total number of coronavirus cases in the United States is 893,119 and the number of deaths is 42,686 [10]. The total number of coronavirus cases in Spain is 204,178 and the deaths is 21,282. With so many coronavirus cases and deaths, it is difficult to determine the exact size of the pandemic because it is important to count all cases, not only in severe and symptomatic cases, but also in mild cases [11].

April 21, 2020, based on the WHO report, worldwide have confirmed 23,97,216 cases and 162,956 deaths distributed by countries: The European Union has 11,872,184 cases and 106,342 deaths, in Southeast Asia 31,670 cases and 1,341 deaths, in Eastern Mediterranean Region 134,470 cases and 6,185 deaths, in Western Pacific Region 134,506 cases and 5,685 deaths, in African Region 15,555 cases and 704 deaths, [12-14].

Analysis of Immune Pathophysiology and Clinical Issue

In pathophysiology and clinical publications, to address the pathogenic processes of SARS-CoV-2, its viral structure and RNA genome (26e32kb) or genome must be considered. Coronaviruses are the most well-known RNA genomes with advantageous bank RNA viruses - 5'-cap shaped still 3'-poly-tails with 30-32kb. Outside of viral RNA, the host polyprotein 1A/1ab (PP1a/PP1ab) related synthesis was sodden [13].

In other words, coronaviruses are viruses mixed with a positive sense single-stranded RNA genome (26e32kb) [15]. Four coronavirus genera (α, β, y, d) have been identified so far, one is the corona virus (HCoVs), 2nd is the (HCoV-229E or NL63) and the other is the coronavirus (MERS-CoV, SARS-CoV, HCoV-OC43 and HCoV-HKU1) genera [4]. Hospitalized with pneumonia from 18 December to 29 December 2019 due to the virus genome sequencing, all of them have a surprising B-CoV strain. The presence of V strain was revealed [5]. The atypical COV genome may contain at least six ORFs, including a frame shift between ORF1a and ORF1b leading to the production of both pp1a and pp1ab polypeptides that are virally encoded chymotrypsin (3CLpro) or processed by (MPro), as well as one or two papain-like proteins to produce 16 non-structural proteins (nsp1-nsp16) [16]. The other ORFs of SARS-CoV-2 on the one-third of genome encode four main structural proteins: Spike, nucleocapsid, envelope proteins and membrane proteins, including accessories for protein's chain encode [13,16]. The various CoVs present special structural and ancillary proteins translated by dedicated sgRNA. Pathophysiology and the virulence process of COVs, and therefore SARS-CoV-2 are linked to the efficacy of NSPs

and structural proteins. For example, research has underlined that NSPs is able to block the innate immune response of the host [17].

In this isolated Novel B-CoV, two bat-derived acute respiratory syndromes (SARS), such as coronavirus, Bat-SL-CoV zc 45 and Bat-SL-CoV zg21, and about 50% of their identities, are identified by MERS-CoV [5]. The B-CoV Novel was then named "SARS-CoV-2" by the International Virus Classification Commission. The genome of SARS-CoV-2 is similar to that of normal CoVs and contains at least ten free-rising frames (ORFs), the first ORF (ORFs 1a/b), about two-thirds of the viral RNA is translated into two large polyproteins. During SARS-CoV and MERS-CoV, two polyproteins pp1a and pp1ab are processed into 16 structural proteins (NSP1-NSP16) that form the viral replication transcription complex [6]. These NSPs rearrange membranes arising from the Rough Endoplasmic Reticulum (RER) to double-membered vesicles where viral replication and replication occur [18,19]. The data available so far suggest that the viral infection is capable of creating additional immunity within the host. In some cases, a reaction occurs that is labeled as a whole "cytokine storm". Its effect is extensive damage to tissues. It is also involved in the pathogenesis of Cytokine Release Syndrome (CRS), an acute systemic inflammatory syndrome characterized by fever and multiple organs [20].

According to Doctor's advice for those countries that have been infected with the corona virus, it has also been reported that there are many convulsant patients who donate plasma in contrast to SARS-CoV-2, such as SARS-CoV [21] and MERS-COV [22] tests. It has achieved early results in acute, severe SARS-CoV-2 patients. Moreover, recombinant human Monoclonal Antibody (mAb) generation is a fairly straightforward way to neutralize SARS-CoV. CR3022, a SARS coronavirus-specific human monoclonal antibody, can bind strongly to the receptor-binding domain (RBD) of SARS-CoV-2 and is likely to develop as a candidate treatment for SARS-CoV-2 infections [23]. Other monoclonal antibodies neutralizing SARS-CoV, such as m396, CR3014, may could be an alternative treatment option for SARS-CoV-2 [24].

Coronavirus Transmission Routes

COVID-19 is transmitted through droplets and fomites during close unprotected contact between an infector and an infected. No airborne spread was reported for COVID-19 and it is not believed to be a major driver of transmission based on available evidence; However, this can be imagined if specific aerosol production methods operate in healthcare facilities. Fecal shading has been demonstrated for some patients, and a limited number of case reports identified a viable virus. However, the fetal-oral route does not appear to be the driver of the COVID-19 transmission; Its role and significance for COVID-19 remains to be determined. Viral shedding is discussed in Technical Findings. Coronavirus is usually transmitted through infected patients. Infected patients, in particular, may be sneezing or coughing, or may be infected with the virus through contact with the patient closeness [10].

Household Transmission

First in China, human-to-human transmission of the COVID-19 virus is found in most cases in families. According to detailed information from jointly investigated mission clusters and a few adopted transmission studies, which occurred in several provinces. Of the 344 clusters involved in 1308 cases (out of a total of 1836 cases reported) in Guangdong Province and Sichuan Province, most clusters (78% -85%) occurred in families. Household infection studies are currently underway, but ongoing preliminary studies in Guangdong estimate that the rate of secondary attacks in households starts at 3-10%. Most people in Bangladesh are infected with people returning from abroad, such as China, European Union and Americans [10].

Susceptibility

Since COVID-19 is a newly identified virus, humans have no pre-existing immunity. Based on the epidemiological characteristics observed in China so far, everyone is considered susceptible, although there may be risky reasons for increasing susceptibility to infection. This requires further study, as well as whether it is immune-neutral after infection. Sensitivity is very good if it is isolated and different from everyone else. And if everyone lives together for miles, it will be the pandemic of the Corona virus. In this case everyone has to stay at home separately, stay safe, maintain social distance and thus keep everyone in the family safe from the corona virus [10].

Corona Virus Signs, Symptoms, Disease Progression and Severity

The symptoms of the corona virus are similar to those of pneumonia. The virus first appeared in Wuhan, China. China detects the symptoms of the corona virus in its country. That is, patients with COVID-19 showed clinical manifestations with fever, unproductive cough, dyspnea, myalgia, fatigue, normal or decreased leukocyte count, and radiographic evidence of pneumonia [2,25]. However, although COVID-19 viruses are rarely understood, similar processes to SARS-CoV and MERS-CoV are still used to facilitate the recognition of COVID-19. SARS-CoV-2 can give a lot of information about the infection virus.

The symptoms of COVID-19 are not specific, and the presentation of the disease can range from any symptom (non-communicable) to severe pneumonia and death. As of February 20, 2020, and based on 55924 laboratory confirmed cases, common signs and symptoms include: fever (87.9%), dry cough (67.7%), fatigue (38.1%), chin production (33.4%), and shortness of breath (18.6 %), Sore throat (13.9%), headache (13.6%), myalgia or arthralgia (14.8%), chills coldness (11.4%), nausea or vomiting (5.0%)), Nasal congestion (4.6%), diarrhea (3.7%), and hemoptysis (0.9%), and conjunctival congestion (0.8%). People with COVID-19 usually develop signs and symptoms with mild shortness of breath and fever, on average 5-6 days after infection (incubation period 5-6 days, range 1-14 days) [10].

These symptoms may vary slightly depending on the weather in different countries. Reviewing the context of Bangladesh, it can be seen that apart from respiratory symptoms, fever, cough, and respiratory problems are the main symptoms. It attacks the lungs. Symptoms usually begin with a dry cough and fever, followed by respiratory problems. It usually takes an average of five days for the symptoms to manifest. On April 27, 2020, a group of Italian doctors and researchers found the corona virus in the eyes of a Chinese woman in Italy. They say the corona virus can stay in the human eye for 6-7 weeks.

Corona Virus Entry into The Human Body

So far, more than two hundred articles have been published on corona virus, infections, treatment and recovery. It can be seen by the all-round review. Coronavirus S protein has been reported to be an important determinant of virus entry into host cells [2]. The envelope binds the spike glycoprotein to its cellular receptor, ACE2 [26] for SARS-CoV and SARS-CoV -2 [27], CD26 for SARS-CoV-2 [28], Dipeptydyl peptidase 4 (DPP4) for MARS-CoV [29]. The entry of cells into cells was initially identified by direct membrane synthesis between the virus and the plasma membrane [30]. Belouzard et al. [31] A critical proteolytic division that mediates membrane fusion and viral infection has occurred in the location of the SARS-COV S protein (S20). MERS-CoV has developed an unusual two-step furin activation for membrane synthesis [32]. In addition to membrane fusion, clathrin-dependent and independent endocytosis also makes SARS-CoV entry too [33,34]. After the virus enters the cells, the viral RNA genome is released into the cytoplasm and translated into two polyproteins and structural proteins, after which replication of the viral genome begins [4].

Fever begins with a viral infection, followed by a dry cough. About a week later the shortness of breath began. The corona virus usually enters the mouth through the respiratory tract and spreads to different parts of the human body after a few days. Subject to review, for example, the virus may pass through the mucous membranes, especially the nasal and laryngeal mucosa, then enter the lungs through the respiratory tract. The virus can then invade target organs that release Angiotensin Converting Enzyme 2 (ACE2) such as the lungs, heart, renal system, and gastrointestinal tract [20,34,35]. The clinical spectrum of COVID-19 varies with therapeutic conditions characterized by short-term respiratory failure or from an asymptomatic or paucisymptomatic form that requires mechanical ventilation and support of an Intensive Care Unit (ICU). Multiple Organ Dysfunction Syndromes (MODS) [36]. The main symptoms known, pneumonia is the most frequently severe manifestation of infection, which is initially characterized by fever, cough, dyspnea, and bilateral penetrates into the chest [37].

Coronavirus Immune Evasion or Prevention

In many countries around the world, the use of masks is a popular way to prevent infections. Especially in China, where the spread of coronavirus has started, people always wear nose and face masks to protect themselves from air pollution. Moreover, it can be seen by reviewing various articles. For better survival in host cells, SARS-CoV and MERS-CoV use multiple strategies to avoid immune responses. No specific antiviral treatment has been proposed for COVID-19 and no vaccine is currently available [38] treatment is noteworthy, and oxygen therapy represents a major treatment intervention for patients with severe infections. Mechanical ventilation may be necessary in the event of respiratory failure in oxygen therapy, hemodynamic assistance is required to manage the septic shock [38]. Evolutionally preserved microbial structures called Pathogen-Related Molecular patterns (PAMPs) may be recognized by Pattern Recognition Receptors (PRRs).

However, SARS-CoV and MERS-CoV can produce double-membered vesicles deficient in PRRs and then replicates in these vessels, thus avoiding their dsRNA host identification [39]. IFN-I (IFN-A and IFN-B) have had protective effects of SARS-CoV and MRS-CoV infections, but the IFN-I pathway is infected by infected rats [40,41]. MERS-CoV can block IFN inclusion at the level of MDA5 activation through direct interaction with double-stranded RNA [42] in the ancillary protein 4. Also, the membrane proteins of ORF4A, ORF4B, ORF5, and MERS-CoV inhibit the nuclear transport of IFN Regulatory Factor 3 (IRF3) and activation of IFN B- promoter [43]. Antigen presentation may also be affected by coronavirus. For example, the expression of genes related to antigen presentation is down-regulated after MERS-CoV infection [44]. Thus, disrupting the resistance of SARS-CoV-2 is essential in its treatment and in the development of specific drugs.

Diagnosis of COVID-19

A type of corona virus that commonly infects the respiratory tract (mouth, nose, and throat) of mammals, including humans, causing colds, pneumonia, and acute respiratory problems. Coronavirus Disease 2019 or Covid-19 is an infectious human disease caused by a virus called Coronavirus 2 (SARS-CoV-2) which causes severe acute respiratory symptoms [45]. The disease was first identified in December 2019 in China. Later, in early 2020, the disease spread worldwide and became a global epidemic [46,47]. Common symptoms of the disease include fever, runny nose and shortness of breath. In some cases, muscle aches, recurrent spitting, and sore throat may occur [48,49]. In most cases, the symptoms are mild, [50] but in some severe cases, pneumonia and paralysis of various organs are also present [46,51].

Clinical diagnosis of COVID-19 is based on epidemiological history, clinical manifestations and some helpful tests. Nucleic acid detection, CT scan, Immune Identification Technology (IgM/IgG Point-of-Care Testing (POCT)), Enzyme-Linked Immunosorbent Assay (ELISA) and blood culture. However, the clinical signs and symptoms of patients with SARS-CoV-2 are extremely mild, including symptoms of shortness of breath, cough, fever, dyspnea, and viral pneumonia. Thus, just as epidemiological history is necessary, it is necessary to perform helpful tests for the diagnosis of COVID-19.

Current Treatment Strategies For COVID-19

Just like SARS-CoV and MERS-CoV [52,53], there are currently no clinically proven specific antiviral agents for SARS-CoV-2 infections.

Supportive treatment remains the most important management strategy, including the use of broad-spectrum antibiotics, oxygen therapy, storage fluid management, and coverage of secondary bacterial infections [2]. Studies on the molecular mechanisms of coronavirus infection [54] and the genomic organization of the SARS-CoV-2 [5] have several potential therapeutic goals in reconsidering existing antiviral agents or developing effective interventions against Novel Coronavirus.

Prevention is, so far, the best practice to reduce the effects of COVID-19 considering the lack of effective treatment. At the moment, there is no vaccine and the best prevention is to avoid exposure to the virus [55]. To achieve this goal, the main steps are as follows:

1. Use a face mask.
2. Coughing and sneezing with tissues.
3. Wash hands regularly with soap or disinfectant with at least 60% alcohol hand sanitizer.
4. To avoid contact with infected people.
5. Maintain a reasonable distance from people.
6. Refrain from touching the eyes, nose and mouth without washing hands [56].

Interestingly, the WHO has issued detailed guidelines which include:

I. Regularly and thoroughly clean your hands with alcohol-based hand rubs or wash them with soap and water.

II. Avoid touching the eyes, nose and mouth.

III. Practice breathing through your mouth and nose with your bent elbow or tissue when you cough or sneeze.

IV. If you have a fever, cough, and shortness of breath, seek immediate medical attention.

V. Be aware and follow the advice given by your healthcare provider.

VI. Maintain a distance of at least 1m (3ft) between yourself and someone coughing or sneezing [57].

Specifically, regarding the use of face masks, health care workers are advised to use particulate respirators such as recognized N95 or filtering facepiece 2 (FFP2) to use medical masks when performing suspicious or certain care while performing aerosol production [58]. Furthermore, while no one in the public needs to wear a medical mask except for symptoms of asthma, people with symptoms of asthma are advised to use medical masks in both healthcare and home care [59].

Vaccine for COVID-19

The effective SARS-CoV-2 vaccine is required to reduce the disease, since the advent of the coronavirus, developing countries have been working hard to find a vaccine for the virus. Where severity, viral shedding and infection, thus helping to control coronavirus outbreaks. China initially thought that there is several vaccine strategies against SARS-CoV, including MER-CoV tested in animals, including a live attenuated virus, viral vector, inactivated virus, subunit vaccine, recombinant DNA and proteins vaccines [60]. These studies are ongoing, but it will take months to years to develop SARS-CoV-2 vaccines. Cheeky. Currently, there may be many promising goals for ARS-CoV-2, but more laboratory and clinical evidence should still be explored. The WHO is working with Chinese scientists to launch more than 60 clinical trials for a possible treatment for SARS-CoV-2. Conventional Chinese medicine seems to have had some effect on adjuvant treatment. Several clinical trials of new drugs, including HIV drugs and stem cells, testified to that.

The coronavirus vaccine has already been announced in many countries. While the whole world is not making a mistake in trying to survive the coronavirus pandemic, the Oxford's Jenner Institute, London, has shed light on the coronavirus vaccine. The human trial has also started by making a vaccine UN Under-Secretary-General Antonio Guterres said the under-trial vaccine would be used to improve global health. This vaccine will be very affordable for everyone to get it [61]. The ray of hope against corona, the second most likely vaccine in the United States is INO 4800 [62]. According to a statement from the University of Hyderabad, Dr. Seema, a professor in the Department of Biochemistry, has developed a possible corona vaccine [62].

Future Perspectives and Planning

The outbreak of COVID-19 is proving to be an unprecedented catastrophe, especially in the most affected countries, including China, Italy, Iran, the United States and Bangladesh, especially in the health, social and economic spheres. It is too early to predict any realistic scenario, but it will have a strong global impact. High-income countries, especially those already affected by the outbreak, seem to be facing a catastrophic outlook, while low-income countries seem to have two possible scenarios. In the worst-case scenario, in particular, when an outbreak of COVID-19 occurs, most countries will be unprepared, with little resources allocated on a viral emergency basis, and the consequences will be catastrophic. The pandemic has not yet taken shape in Bangladesh but it could happen. Because the people of Bangladesh are very unconscious. Moreover, a good aspect for Bangladesh is that now the summer temperature is around 30 °F or above.

In the best case, such as the global outbreak of SARS-CoV in 2003, COVID-19 does not affect Africa or South America on a large scale, suggesting that the winter respiratory viruses spread more effectively and, thus, the southern hemisphere will be infected later in the year, if not at all [58]. It contributes to climate-specific cultural differences (living outdoors more than indoors), the effect of UV light on the survival of the virus on the surface, immunological differences in population (innate immunity), pre-exposure to coronavirus or higher temperatures [59]. This information was also indirectly supported by China and colleagues who artificially reproduced various environmental conditions to study the viability of the virus [63].

In addition to this promising low impact, if preventive measures are taken, we can register a low incidence of hygiene-related diseases that still represent the leading causes of death [64]. So far, no any one country has been able to claim the perfect vaccine for the corona virus. This is why we can avoid corona virus infection as much as possible through proper awareness. So, the mask is musical, washing hands frequently for an hour, using hand sanitaria's, avoiding contact with infected people, maintaining a reasonable distance from people, and refraining from touching eyes, nose and face without washing hands. In particular, adherence to the detailed guidelines issued by the WHO.

Conclusion

Reviewing different types of papers, it is seen that human immunity should be enhanced as it helps in the prevention of the corona virus. It is possible to exercise regularly, eat nutritious food, follow conscious hygiene rules. In this review, it depends on the occurrence of SARS-Cavi-2 and the development of the virus and the interaction between the individual's immune system. An individual's immune system includes genetics, age, male, female, nutritional status, and physical condition. Among these factors, whether a person is infected with the virus, contributes to the duration and severity of the disease, and can lead to re-infection [65].

In the primary stages of the corona virus epidemic, accurate diagnosis helps control the spread of the disease. New, accurate and precise technology must be developed for SARS-CoV-2 detection. However, it should not be considered that a hundred percent cure is possible through medical intervention. This review provides an insight into the current situation of COVID-19 and also the need for public health effects, pathophysiology and clinical manifestations, diagnosis, case management, emergency response and preparedness. In this regard, the World Health Organization has developed a fast-acting vaccine based on the symptoms of the virus. The end of the epidemic could have the effects of global economic downturn, social catastrophe and health catastrophe that need to be addressed in advance. To take effective health care measures in future.

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