Covid-19: Healthcare, Treatment and Precautions

Poorva Agarwal[1], Yashi Mehta[2]

[1, 2]Student, Department of Computer Science, Rajasthan College of Engineering for Women, Bhankrota, Jaipur, Rajasthan, India
Email address: [1]poorvaagarwal097 @ gmail.com, [2]yashi13mehta @ gmail.com

Abstract— *Coronavirus, now remotely extending its path in India. Earlier it was unfamiliar to us and now there are about 200000+ cases, all over the country. According to World Health Organization (WHO), Government of India, health and medical advisories, social distancing protocol is the only way to protect ourselves and our families to get infected from the virus. This paper briefly covers introduction, viral spread, treatment, safety measures being followed, current active cases, death toll, cured cases in India. The medical team including doctors, nurses along with other team members are performing a great job and along with the Government and the police officers, but the most important thing for every citizens of country is to follow social distancing and the actions taken by the government strictly to protect ourselves and our families from this pandemic.*

Keywords— *SARS-CoV-2, Coronavirus, India, Covid-19.*

I. INTRODUCTION

The Global coronavirus pandemic or Covid-19, is also called as Severe Acute Respiratory Syndrome (SARS-CoV-2), is a deadly zoonotic, infectious, global emergency pandemic that affected more than 200 countries worldwide. China was the first country to get infected by coronavirus and have critical cases of severe respiratory infection in December 2019. Then, the virus expanded its hand in Italy, America, Japan, South Korea, Iran, and ultimately in India. It was assumed that the Covid-19 might be associated with the moist market from Wuhan that was not obeyed with safety and health regulations. The pandemic is extremely close in symptoms to other viral breathing disease. It has been seen that symptoms might get appeared in about two to fourteen days. Earlier it was appeared as animal but now it is extending from man to man. Currently symptoms observed are cough, fever and difficulty in breathing. Complications that shows that one is being infected by virus are sepsis, ARDS and pneumonia.

II. MATERIALS AND METHODS

A. Structure of Virus

Coronavirus is a spherical, enveloped structure having diameter of 60-140 nm and belongs to the genus Beta coronavirus. It is surrounded by-protein, E-protein, membrane glycoprotein or M-protein, and contains single-stranded ribonucleic acid as genetic material (Figure 1). The S-protein plays a crucial role in causing major human respiratory infection.
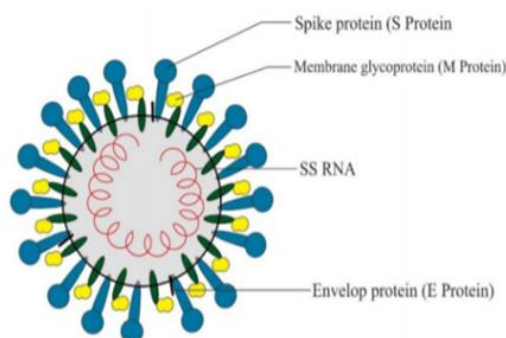

Fig. 1. Structure of SARS-CoV-2.

B. Viral Spread in India

COVID-19 spreads mainly by getting in touch with the infected people. Corona-virus spreads mainly in following ways:

1. Direct Close Contact: In direct close contact, a person gets infected by coming in direct exposure with infected people, mainly if the infected people do not cover their faces while contacting.
2. Indirect Contact: In indirect contact, the droplets remains alive on plane and clothes for the number of days. However, by getting in touch with the infected clothes and surfaces and then touching his/her face, he/she get infected.
3. In about one to fourteen days, the symptoms are seen in the infected person. The infected person with no symptoms can also transmit the virus.

C. Symptoms

COVID-19 attacks individual people in different manner. The infected person will evolve light to medium illness and get recovered without hospitalization.
The common symptoms are:
1. Tussis (Dry cough).
2. Fatigue.
3. Pyrexia (Fever).
4. Difficulty in breathing.

The serious symptoms are:
1. Cardio Muscular disease.
2. Difficulty breathing or shortness of breath.
3. Loss of speech or movement.

The less common symptoms are:
1. Headache.
2. Loss of smell or taste.
3. Diarrhoea.
4. Sore throat.
5. Pain and Aches.
6. A rash on skin.

If you have serious symptoms then seek immediate medical attention. Always make a phone prior visiting health concerned (doctor).

48

Person showing medium symptoms should take care of themselves at their home.

In general, it takes 5–6 days to show mild symptoms from when someone is infected with the virus, however it can take up to 14 days.

D. Treatment

According to WHO, there is no particular treatment for the global coronavirus. Most of the symptoms can be treated on the basis of patient's condition. In addition, caring for the infected persons can be result in better health. According to Dr K Srinath Reddy, there is still no convincing evidence for treatment. To rule out unmeasured confounding and bias, randomised-control trial evidence in larger numbers is needed, such as from multi-country solidarity trial being conducted by World Health Organization. The drug, Hydroxychloroquine is approved for treating patients of Covid-19 in India. While the FDA have not approved either of these medications for treating COVID-19, they issued an Emergency Use Asuthorization (EUA) for both hydroxychloroquine and chloroquine on March 28, 2020.

The EUA grants doctors the ability to prescribe these medications to people with a laboratory-confirmed SARS-CoV-2 infection under the following conditions:

- the person is in the hospital due to severe COVID-19 symptoms
- the person weighs at least 50 kilograms
- the person cannot participate in a clinical trial

Remdesivir is a broad-spectrum antiviral medication developed by biopharmaceutical company called Gilead Sciences. It is administrated via injection into a vein. Sweating, nausea, low blood pressure are the side effects of Remdesivir.

Favipiravir is an antiviral medication used to treat influenza in Japan. It is been developed by Toyama chemical. It became a generic drug in 2019.

Plasma therapy is one of the good treatment options available because as of now we do not have any definitive treatment for COVID-19. Most of the therapies are either experimental or have some effectiveness. This is one of the promising therapies, however, it is not an established treatment. It is a very safe procedure. Plasma therapy handle communicable diseases. Very occasionally, side effect to plasma can happen but these are generally light reactions but not life-threatening. There are no precautionary measures that you can take. Only thing is we do not give it pregnant women.

E. Prevention and Safety Measures

1. Time to time, either wash or sanitize your hands properly.
2. Keep at least 3 feet distance while interacting with others.
3. Avoid gatherings. If you need to move out of the house then you should wear a mask.
4. Stay home and self-isolate even with minor symptoms such as headache, cough, fever, until you recover.
5. Avoid touching your mouth, nose and eyes.
6. If you have serious symptoms then seek immediate medical attention.
7. Be up to date with the latest information about coronavirus which are given by WHO, government.

III.   CURRENT SCENARIO IN INDIA

The country noted the first corona-virus positive case on 30/01/2020 from the state of Kerala, which was directly linked to Wuhan, the epicentre of Covid-19 outbreak. A 76 years old male who examined positive for Severe Acute Respiratory Syndrome was the first death from Covid-19 in India, reported from Kalburgi, Karnataka. Karnataka was the first state to report first Covid-19 death on 11 March 2020 in India. Reports of confirmed cases from other Indian states started to increase gradually. Government of India announced 21 days of lockdown in effect from 25 march 2020 with prescribed guidelines regarding management of essential services (Guidelines on the measures to be taken by ministries 2020). The lockdown was further extended till 3 May 2020 (total duration 40 days).

As of 3 June 2020, majority of confirmed cases were reported from states such as Maharashtra-70013, Delhi-20834, Tamil Nadu-23495, Rajasthan-8980, Madhya Pradesh-8283, Gujarat-17200, Uttar Pradesh-8075, and Telangana-2792. Other states too reported increased cases of Covid-19. Total 5834 deaths and 100419 cured/discharged/ migrated cases were reported from the country.

IV.   RESULT AND DISCUSSION

Medical teams and government are doing a great job. Citizens should stick to Government rules and regulations strictly. We should take learn from the other neighbouring countries like China and Italy. The most important thing is to keep social distancing and avoid gatherings as much as one can. Government, in phase 2 of the pandemic, due to rise in the positive cases of coronavirus has put many states under lock down. The people should understand that it is their own responsibility to protect themselves and their families from the pandemic. The end of global coronavirus in India is unknown but by following social distancing protocol strictly, we can protect ourselves from coronavirus pandemic.

V.   CONCLUSION

In spite new efforts to treat the disease, more research is needed to develop new treatment for novel coronavirus. Coronavirus is a universal disease that affect millions of people globally. Due to the shocking effect of the spread of coronavirus, especially in every part the countries, medical professionals are implementing new strategies for the treatment of coronavirus.

ACKNOWLEDGEMENT

REFERENCES

[1] https://www.mohfw.gov.in/pdf/PreventionandManagementofCOVID19FLWEnglish.pdf

[2] https://www.who.int/healthtopics/coronavirus#tab=tab_3

[3] Sanchita Sharma, May 09 2020,Hindustan Times, "anti malaria drug fails another test as a covid-19 treatment says study"

[4] https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

[5] Varsha Kachroo, Resident, Dept. of Medicine, Govt. Medical College, Jammu-IJRR-International Journal of Research and Review Novel Coronavirus in India: Current Scenario, Vol.7, Issue 3, pp.455-477, March 2020

[6] Nelson Vinod Moses, May 07 2020, Hindustan Times,"covid-19 India is staring at a mental health crisis"

[7] M. David, Lokesh Kumar P. and Suraj S. Dabire, 12 April 2020, Published- 17 April 2020," Covid-19 coronavirus a global emergency outbreak and its implications in India", Vol.5, Issue 2, pp.89-98, April 2020

50