

COVID -19: A REVIEW

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ABSTRACT

A corona virus is the respiratory syndrome virus. The virus originated from the bats and transmitted to human through yet intermediary animals in wuhan, china December 2019. The symptoms are usually fever, cough, sore throat, breathlessness, fatigue etc. The disease mild in most in mast people. It may progress to pneumonia, acute Respiratory syndrome. Treatment is usually supportive. The role of antiviral agent is yet to be established, avoid this virus close contact with other people. Corona virus transmitted through member ACE-2 exopeptide receptor prevention is avoid to grouping and the contact with the diseased people.

KEYWORDS: WHO, pneumonia, etiology.**INTRODUCTION**

There is a new worldwide outbreak of a new type of coronavirus (COVID- 19), which originated from Wuhan city, China and has now spread to 140 other countries, including Japan, Korea and Italy, india. The World Health Organization (WHO) declared that COVID- 19 has become a global health concern, causing severe respiratory tract infections in humans. While the infection is still associated with high mortality, specific antiviral therapy is lacking and management remains mainly supportive. COVID-19 was first identified and isolated from pneumonia patient belongs to Wuhan, china. Till 05/ 03/2020 around 96,000 cases of coronavirus disease 2019 (COVID-19) and 3300 deaths have been reported. In 2012, Saudi Arabian reports were presented several infected patient and deaths. Another study report of Hong Kong was confirmed 50 patient of severe acute respiratory syndrome while 30 of them were confirmed as corona virus infected. In 2012, Saudi Arabian reports were presented several infected patient and deaths.

SPREADING

The number of cases started increasing exponentially, some of which did not have exposure to the live animal market, suggestive of the fact that human-to-human transmission was occurring. A study from Wuhan Institute of Virology showed 96.2% similarity in the gene sequence between SARS-CoV-2 and bat coronavirus using se-quencing technique. Coronaviruses will infect most humans at some time during their lifetime. Coronaviruses can spread effectively, which makes them so contagious. To prevent transmission, people should stay at house and rest while symptoms are active don't go outside the home. They should also avoid

close contact with other human. Covering the mouth and nose with a tissue or handkerchief while coughing or sneezing can also help prevent spreading. It is important to lose of any tissues after use and maintain hygiene around the home. As of 05/03/2020 96,000 cases worldwide (80,000 in China) and 87 other countries and 1 international conveyance (696, in the cruise ship Diamond Princess parked off the coast of Japan) have been reported.

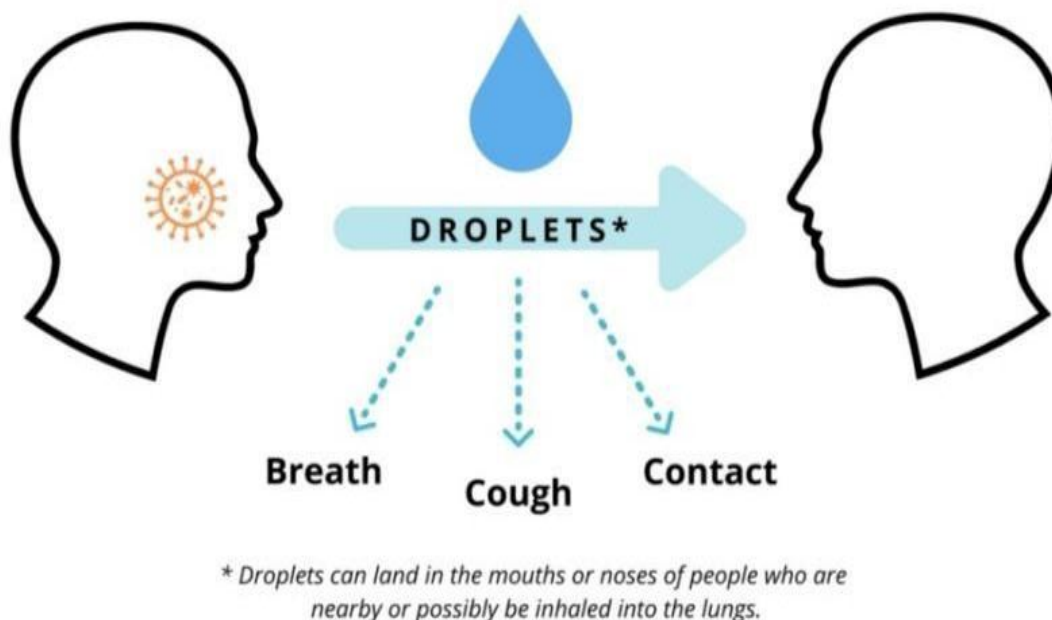


Fig 1: Spreading.

SYMPTOMS

All ages are easily susceptible. Infection is spread through large droplets which are generated during coughing and sneezing by symptomatic patients but can also occur from asymptomatic people and before onset of symptoms. An unusual case was also recorded in which the incubation period was as long as 19 days. Notably, a long term incubation time means adjustments in screening and control policies in systematic manner. The 19-day incubation period is a few time probability event, and experts suggest 14 days for quarantine. Patients can be infectious for as long as the symptoms last and even on clinical recovery. Some people may act as super spreaders and hotspot for humans; a UK citizen who attended a conference in Singapore infected 11 other

people while staying in a resort in the French Alps and upon return to the UK kingdom. These infected droplets can spread 1–2 m and deposited on surfaces. The virus can remain viable on surfaces for few days in favourable atmospheric conditions but are destroyed in less than, hydrogen peroxide etc. Infection is acquired either by inhalation of these droplets or touching surfaces contaminated by them and then touching the nose, mouth and eyes and other body parts. The virus is also found in the stool and contaminated the water supply and subsequent transmission via aerosolization/ feco-oral route is also hypothesized incubation period varies from 2 to 14 days. Studies have identified angiotensin receptor 2 (ACE-2) is the receptor through which the virus enters the respiratory mucosa.

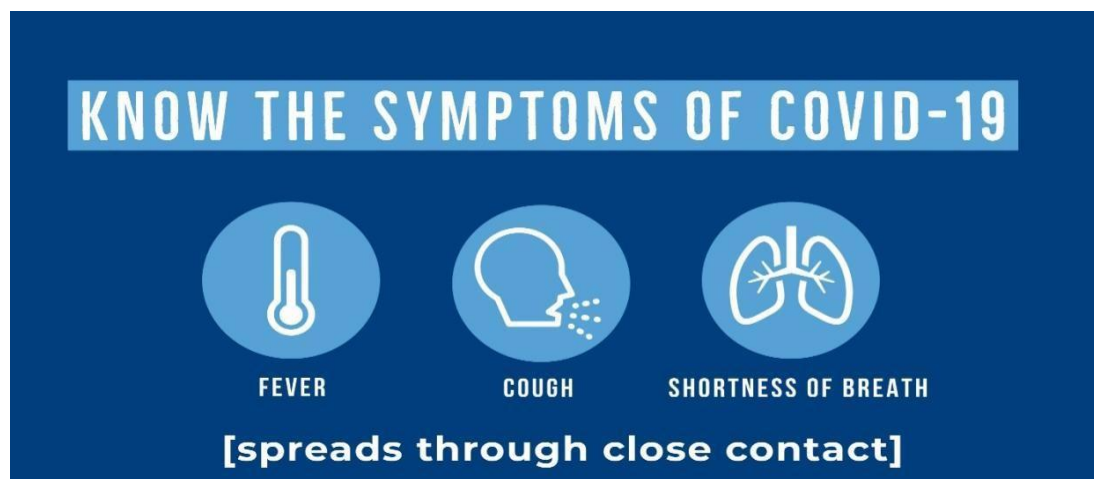


Fig 2: Symptoms.

DIAGNOSIS

The Specific diagnosis is done specific molecular tests on respiratory samples (throat sample/ nasopharyngeal

sample/ sputum/ endotracheal aspirates and bronchoalveolar lavage). Virus may also be detected in the stool and in some cases, the blood. It must be know

that the multiplex PCR panels currently available which do not include the COVID-19. The differential diagnosis includes all types of respiratory viruses infections [influenza, parainfluenza, adenovirus, (RSV), human metapneumovirus, non COVID-19 coronavirus], atypical organisms (mycoplasma, chlamydia) and bacterial infections. It is important to know that not possible to differentiate COVID-19 from these infections medically or through routine lab tests. Therefore travel history very becomes important. However, as the disease spreads, the travel history will become irrelevant. Rapid and accurate detection of COVID-19 is important to control outbreaks in the community and in hospitals. Current diagnostic tests for coronavirus consist reverse-transcription polymerase chain reaction (RT-PCR), real-time RT-PCR (rRT-PCR), and reverse transcription loop-mediated isothermal amplification (RT-LAMP) The new laboratory test is time-consuming, and a shortage of commercial kits delays diagnosis. For patients suffering from fever, sore throat, fatigue, coughing or dyspnea, a patient that is coupled with recent exposure, COVID-19 infection should be diagnosed with typical chest computerized tomography (CT) characteristics despite negative RT-PCR results.

TREATMENT

Treatment is very essentially supportive and symptomatic. The first and very important step is to ensure adequate isolation to prevent transmission to other contacts, patients and healthcare workers. Mild- illness should be managed at home with counseling about danger signs. The usual principles are maintaining hydration and nutrition and controlling fever and cough respiratory syndrome. Routine use of antibiotics and antivirals such as oseltamivir must be avoided in confirmed cases. In some hypoxic patients, provision of oxygen through nasal prongs, mask, high flow nasal cannula (HFNC) or non-invasive ventilation is indicated. Mechanical ventilation and even extra corporeal membrane oxygen support if be needed. Renal replacement therapy may be needed in some. Antibiotics and antifungals are needed if co-infections are suspected or proven. The main role of corticosteroids is unproven; while current international consensus and WHO advocate against their use, Chinese guidelines do recommend short term therapy with low-to-moderate dose corticosteroids in COVID-19 ARDS. Detailed guidelines for critical care management for COVID-19 have been published by the WHO. More evidence is needed before these drugs are recommended.

PREVENTION

Since at this time there are no approved treatments for this infection or disease, prevention is important. Various properties of this virus make prevention difficult namely, non-specific features of the disease, the infectivity even before onset of symptoms in the incubation period, transmission from asymptomatic people, long time incubation period, tropism for mucosal surfaces like conjunctiva, prolonged duration of the illness and

transmission even after clinical recovery. Isolation of confirmed or suspected cases with mild illness reception is suggest. The ventilation at home should be good with sunlight to permit for destruction of virus. Patients should be asked to wear a easy surgical mask and practice cough hygiene. Care givers should be asked to wear a easy surgical mask when in the same room as patient and use hand hygiene every 15–20 min. The greatest risk in COVID-19 is transmission to health care workers.

In the SARS outbreak of 2002, 21% of those affected were healthcare workers. The greatest risk in COVID-19 transmission to healthcare workers. In the SARS outbreak of 2002, 21% of those affected were healthcare workers. People can take several steps, including:

1. Resting and avoiding overexertion
2. Drinking enough water
3. avoiding smoking and smoky area
4. Taking acetaminophen, ibuprofen, or naproxen for pain and fever
5. Using a clean humidifier or cool mist vaporizer
6. A doctor can diagnose the virus responsible by taking a sample of respiratory fluids, such as mucus from the nose, or blood.
7. Standard recommendations to prevent infection spread

Its include regular hand washing, covering mouth and nose when coughing and sneezing, thoroughly cooking meat and eggs.



Fig 3: How to avoid risk of corona virus infection.

CONCLUSION

This new virus outbreak has challenged the economic, medical and public health infrastructure of China and to some extent, of other countries especially, its neighbours. Time alone will tell how the virus will impact our lives here in India. More so, future outbreaks of viruses and pathogens of zoonotic origin are likely to continue. Therefore, apart from curbing this outbreak, efforts should be made to devise comprehensive measures to prevent future outbreaks of zoonotic origin. Over the past 50 years the emergence of many different coronaviruses that cause a wide variety of human and veterinary diseases has occurred. It is likely that these viruses will continue to emerge and to evolve and cause both human and veterinary outbreaks owing to their ability to recombine, mutate, and infect multiple species and cell type.

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