Coronavirus-A Global Emergency

Md. Abdul Ahad *1

Introduction: Coronavirus is a highly infectious contagious virus producing pandemic throughout the world with high morbidity and mortality. Discussion: Right now, there is no vaccine to prevent human coronavirus infections. But you may be able to reduce your risk of getting or spreading an infection by washing hands often with soap and water for at least 20 seconds, using an alcohol-based hand sanitizer that contains at least 70% alcohol if soap and water are not available. Avoiding touching your face, nose, or mouth with unwashed hands, use of face mask, avoiding close contact with people who are sick, there is no specific treatment for coronavirus. Conclusion: Treatment aims to relieve the symptoms. Most people will get better on their own. However, you can relieve your symptoms by taking over-the-counter medicines for pain, fever, and cough. Using a room humidifier or taking a hot shower to help ease a sore throat and cough. Getting plenty of nutritious diet, drinking fluids and taking rest.

Keywords: Novel coronavirus, Pandemic, Contagious, COVID-19, SARS, MERS.

Number of References: 40; Number of Correspondence: 03.
Coronavirus

Md. Abdul Ahad

In 2003, following the outbreak of severe acute respiratory syndrome (SARS) which had begun the prior year in Asia, and secondary cases elsewhere in the world, the World Health Organization (WHO) issued a press release stating that a novel coronavirus identified by a number of laboratories was the causative agent for SARS. The virus was officially named the SARS coronavirus (SARS-CoV). Over 8,000 people were infected, about 10% of whom died.

Middle East Respiratory Syndrome (MERS)

In September 2012, a new type of coronavirus was identified, initially called Novel Coronavirus 2012, and now officially named Middle East respiratory syndrome coronavirus (MERS-CoV). The World Health Organization issued a global alert soon after. The WHO update on 28 September 2012 stated that the virus did not seem to pass easily from person to person. However, on 12 May 2013, a case of human-to-human transmission in France was confirmed by the French Ministry of Social Affairs and Health. In addition, cases of human-to-human transmission have been reported by the Ministry of Health in Tunisia. Two confirmed cases involved people who seemed to have caught the disease from their late father, who became ill after a visit to Qatar and Saudi Arabia. Despite this, it appears that the virus has trouble spreading from human to human, as most individuals who are infected do not transmit the virus. By 30 October 2013, there were 124 cases and 52 deaths in Saudi Arabia.

Novel Coronavirus (2019-NCOV)

In December 2019, a pneumonia outbreak was reported in Wuhan, China. On 31 December 2019, the outbreak was traced to a novel strain of coronavirus, which was labeled as 2019-NCOV by the World Health Organization (WHO). According to Daniel Lucey at Georgetown University, the first human infections must have occurred in November 2019 or earlier. As of 30 January 2020 (16:00 UTC), there have been 214 confirmed deaths and more than 8,230 confirmed cases in the coronavirus pneumonia outbreak. The Wuhan strain has been identified as a new strain of Betacoronavirus from group 2B with an~70% genetic similarity to the SARS-COV. The virus was suspected to have originated in snakes, but many leading researchers disagree with this conclusion. Daniel Lucey, an infectious disease specialist at Georgetown University, stated that “Now it seems clear that the seafood market is not the only origin of the virus.”

Diagnosis

To make a diagnosis, your health care provider will take your medical history, including asking about your symptoms, do a physical exam, may do blood tests, may do lab tests of sputum, a sample from a throat swab, or other respiratory specimens.

Other Animals

Coronaviruses have been recognized as causing pathological conditions in veterinary medicine since the early 1970s. Except for avian infectious bronchitis, the major related diseases have mainly an intestinal location.
Diseases
Coronaviruses primarily infect the upper respiratory and gastrointestinal tract of mammals and birds. They also cause a range of diseases in farm animals and domesticated pets, some of which can be serious and are a threat to the farming industry. In chickens, the infectious bronchitis virus (IBV), a coronavirus, targets not only the respiratory tract but also the urogenital tract. The virus can spread to different organs throughout the chicken. Economically significant coronaviruses of farm animals include porcine coronavirus (transmissible gastroenteritis coronavirus, TGE) and bovine coronavirus, which both result in diarrhea in young animals. Feline coronavirus: two forms, feline enteric coronavirus is a pathogen of minor clinical significance, but spontaneous mutation of this virus can result in feline infectious peritonitis (FIP), a disease associated with high mortality. Similarly, there are two types of coronavirus that infect ferrets: ferret enteric coronavirus causes a gastrointestinal syndrome known as epizootic catarrhal enteritis (ECE), and a more lethal systemic version of the virus (like FIP in cats) known in ferrets as ferret systemic coronavirus (FSC). There are two types of canine coronavirus (CCoV), one that causes mild gastrointestinal disease and one that has been found to cause respiratory disease. Mouse hepatitis virus (MHV) is a coronavirus that causes an epidemic murine illness with high mortality, especially among colonies of laboratory mice. Sialodacryoadenitis virus (SDAV) is highly infectious coronavirus of laboratory rats, which can be transmitted between individuals by direct contact and indirectly by aerosol. Acute infections have high morbidity and tropism for the salivary, lacrymal and harderian glands. A HKU2-related bat coronavirus called swine acute diarrhea syndrome coronavirus (SADS-CoV) causes diarrhea in pigs. Prior to the discovery of SARS-CoV, MHV had been the best-studied coronavirus both in vivo and in vitro as well as at the molecular level. Some strains of MHV cause a progressive demyelinating encephalitis in mice which has been used as a murine model for multiple sclerosis. Significant research efforts have been focused on elucidating the viral pathogenesis of these animal coronaviruses, especially by virologists interested in veterinary and zoonotic diseases.

Prevention
Right now, there is no vaccine to prevent human coronavirus infections. But you may able to reduce your risk of getting or spreading an infection by: Washing hands often with soap and water for at least 20 seconds, use an alcohol-based hand sanitizer that contains at least 60% alcohol if soap and water are not available. Avoiding touching your face, nose, or mouth with unwashed hands, use face mask. Avoiding close contact with people who are sick, avoid mass gatherings, cleaning and disinfecting surfaces that you frequently touch, covering coughs and sneezes with a tissue, then throw away the tissue and wash your hands. Staying home when sick.

Treatment
There is no specific treatment for coronavirus. Treatment aims to relieve the symptoms. Most people will get better on their own. However, you can relieve your symptoms by: Taking over-the-counter medicines for pain, fever, and cough. However, do not give aspirin to children. Do not give cough medicine to children under four. Using a room humidifier or taking a hot shower to help ease a sore throat and cough. Getting plenty of rest, drinking fluids. If you are worried about your symptoms, contact your health care provider. For severe cases, treatment should include care to support vital organ functions. People who think may have been exposed to 2019-nCoV should contact your healthcare provider immediately.

Conclusion
During previous outbreaks due to other coronavirus (Middle-East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS)), human to human transmission occurred through droplets, contact and fomites, suggesting that the transmission mode of the 2019-NCov can be similar. The basic principles to reduce the general risk of transmission of acute respiratory infections include the following: Avoiding close contact with people suffering from acute respiratory infections. Frequent hand-washing, especially after direct contact with ill people or their environment. Avoiding unprotected contact with farm or wild animals.

Conflict of Interest: None.

Acknowledgement
I am very much grateful to the COVID-19 patients who sacrificed their lives during this pandemic. I am also grateful to the respected COVID-19 fighter doctors and health workers who also dedicated their lives in this war against invisible enemy and pray for their departed souls.

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