

The Coronavirus Disease Covid-19: A Global Nightmare

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The corona virus disease as an emerging pandemics, it affects almost every part of the world and cut across all age groups, but appears to be more serious on certain categories of people (the elderly, the young and those with underline disease conditions like diabetes, heart and liver diseases among others).

Brief background of the disease

The causative agent of this disease was discovered way back in the month of November 2019 in Wuhan, a city in Hubei province of China. The disease came into lamp light in December of the same year, with many confirmed cases and deaths, which lead to Wuhan been quarantined, on January the 23rd of 2020. The disease was first reported as pneumonia outbreak and later linked to a novel strain of coronavirus, and later called Covid-19 [1].

The viral strain involved was given the name 2019-nCoV by the World Health Organization (WHO) and later renamed as SARS-CoV-2 by the International Committee on Taxonomy of Viruses [2].

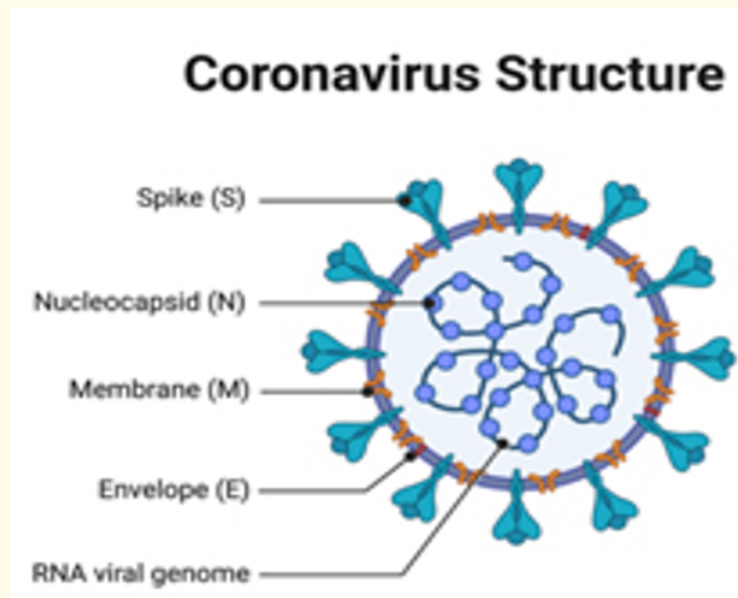


Figure 1: Source: Jonathan, 2020.

According to Karlo, *et al.* [3] the COVID-19 pandemic, is due to a well-established group of disease causing viruses (coronaviruses) that infect mammals (including humans) and birds particularly bats, and belong to the subfamily Orthocoronavirinae and family Coronaviridae [1].

The disease agent (coronavirus), has history of been found in some animals, especially the bats and there exist about forty (40) different species of coronaviruses with seven of them being pathogenic to human being [4]. They are known to cause respiratory tract infections ranging from mild one, such as common cold to lethal infections, such as SARS, MERS and COVID-19 with a high mortality rates [5].

The name coronavirus was derived from the Latin corona, meaning “crown”, which refers to the characteristic appearance under two-dimensional transmission electron microscope, the surface of the virus is also covered in club-shaped protein spikes [6].

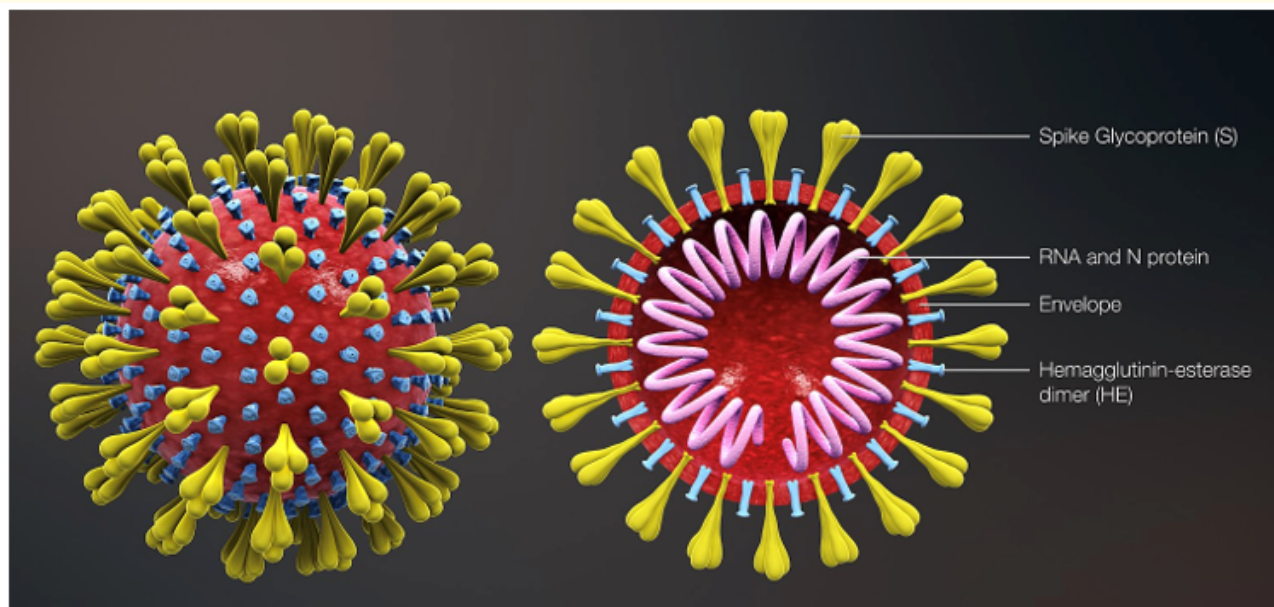


Figure 2: Source: American society for microbiology, 2020 [7].

Survival tendencies for the virus (agent of Covid-19)

The virus is coated with a protein capsule and contains a ribonucleic acid RNA, Thus, on contact with any substance capable of denaturing (coagulating) proteins, the virus is inactivated, these substances include (alcohol, organic solvents and detergents) or can also be destroyed by temperature above 40°C or acidic pH. Survival between 2 and 3 hours on dry surfaces and in the air, and up to 6 days in humid environments has also been reported. But UV rays of the sun are able to destroy them within short time [4].

It was discovered that, coronaviruses are very stable in a frozen state, according to studies, which have shown survival for up to two years at -20°C. It was also observed that SARS-CoV and MERS-CoV can persist on different surfaces for up to a few days depending on combination of temperature, humidity and light. In the same vein, at refrigeration temperature (4°C), the virus remain viable for up to 72 hours. However, coronaviruses are specifically, thermolabile, and are affected by normal cooking temperatures (70°C). Therefore, as a general rule, the consumption of raw or improperly cooked animals and their products should be avoided and raw meat, milk or animal organs must be handled with caution, to avoid cross-contamination with uncooked foods. One good thing is that, SARS-CoV and MERS-

CoV are susceptible to the most common known cleaning and disinfection agents and their protocols and there is no indication so far that SARS-Cov-2 behaves differently [8].

Current situation

According to WHO June 24, 2020, more than 9.1 million cases of COVID-19 have been reported to WHO, with corresponding over 470,000 loss of lives. Last month May 2020, almost 4 million cases have been reported. But it could be recalled that, in the first month of this outbreak, less than 10,000 cases were reported to WHO. It is therefore of utmost importance that, even as we are committed in the vaccines and therapeutics research, we have an urgent responsibility to do everything we can with the tools available at the moment to suppress transmission and save lives it is estimated according to WHO that, at the current rate of about 1 million new cases a week, the world needs about 620,000 cubic meters of oxygen a day, that is, about 88,000 large cylinders a day [9].

As per the data available till 23rd March 2020, there were a lot of casualties of both confirmed cases and deaths due to the disease, revealing how fast the disease was spreading bringing the whole world to its knee. Even though the disease was first reported in China, its aftermaths in different parts of the world were hard felt, in which at some points, Italy, Spain and the US became devastated by the disease with more infection rates than China itself. It was realized at that point that, although China was the Epicentre of the pandemics, it became clearer that travelers contributed immensely to the spread of the virus worldwide, leading to families, cluster and eventual community spread of the disease [10,11].

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