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**COVID-19**

Origin and Etiology

Covid-19, otherwise known as the CORONA DISEASE belong to the Coronaviridae family in the Nidovirales order. It has been identified as the cause of an outbreak of respiratory illness in Wuhan, Hubei Province, China, beginning in December 2019. As of 31 January 2020, this epidemic had spread to 19 countries having over 11,791 (eleven thousand, seven hundred and ninety one) confirmed cases.

The coronavirus belongs to a family of viruses that may cause various symptoms such as pneumonia, fever, breathing difficulty, and lung infection. These viruses are common in animals worldwide, but very few cases have been known to affect humans. the virus evolved to its current pathogenic state through natural selection in a non-human host and then jumped to humans. This is how previous coronavirus outbreaks have emerged, with humans contracting the virus after direct exposure to civets (carnivorous cat-like animals) and camels. Also, researchers proposed bats as the most likely reservoir of the infectious virus. However, There were no documented cases of direct bat-human transmission, which suggested that an intermediate host was likely involved between bats and humans. Although, In the other proposed scenario, a non-pathogenic version of the virus jumped from an animal host into humans and then evolved to its current pathogenic state within the human population.

STRUCTURE

Coronaviruses are enveloped single-stranded RNA viruses that are zoonotic in nature. It consists of a spike protein (S), hemagglutinin-esterease dimer (HE),  a membrane glycoprotein (M), an envelope protein (E) a nucleoclapid protein (N) and RNA.

**Further explanations** : Corona represents crown-like spikes on the outer surface of the virus; thus, it was named as a coronavirus. Coronaviruses are minute in size (65–125 nm in diameter) and contain a single-stranded RNA as a nucleic material, size ranging from 26 to 32kbs in length. The subgroups of coronaviruses family are alpha (α), beta (β), gamma (γ) and delta (δ) coronavirus. only α and β coronaviruses have the ability to infect humans.

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CONTINUATION OF ASSIGNMENT

PATHOPHYSIOLOGY

the consumption of infected animal as a source of food is the major cause of animal to human transmission of the virus and due to close contact with an infected person, the virus is further transmitted to healthy persons.

Based on recent studies, those at high-risk for severe illness from COVID-19 are:

* People aged 65 years or older
* People who live in a nursing home or long-term care facility

Also, people of all ages with underlying medical conditions, particularly if not well controlled, including:

* People with chronic lung disease or moderate to severe asthma
* People who have serious heart conditions
* People who are immunocompromised
  + Many conditions can cause a person to be immunocompromised, including cancer treatment, smoking, bone marrow or organ transplantation, immune deficiencies, poorly controlled HIV or AIDS, and prolonged use of corticosteroids and other immune weakening medications
* People with severe obesity (body mass index [BMI] of 40 or higher) to
* People with diabetes
* People with chronic kidney disease undergoing dialysis
* People with liver disease

Common abnormal physiological changes caused by covid-19 include:

* shortness of breath
* aches and pains at joints
* sore throat
* and very few people will report diarrhoea, nausea or a runny nose.
* Persistent pain or pressure in the chest
* New confusion or inability to arouse
* Bluish lips or face

The following are not all inclusive

N.B. PLEASE SIR I USED MY PHONE TO TYPE THIS, THAT WAS WHY I COULD MAKE USE OF THE SYMBOLS SEEN. THANK YOU SIR.