Matric number; 16/MHS03/018

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Course code; ANA 404

Course tittle; Introduction to histopathology

Assignment; write a comprehensive review of the aetiology of COVID-19, its pathogenesis, histopathological features and the current potential therapies to address it, Also comment on the future of COVID-19 on public health.

coronavirus belongs to a family of viruses that may cause various symptoms such as pneumonia, fever, breathing difficulty, and lung infection (WMHC 2020) . These viruses are common in animals worldwide, but very few cases have been known to affect humans. The World Health Organization (WHO) used the term 2019 novel coronavirus to refer to a coronavirus that affected the lower respiratory tract of patients with pneumonia in Wuhan, China on 29 December 2019 (Li Q. et al,2020. cdc 2020. WHO, 2020). The WHO announced that the official name of the 2019 novel coronavirus is coronavirus disease (COVID-19) (WHO, 2020). And the current reference name for the virus is severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It was reported that a cluster of patients with pneumonia of unknown cause was linked to a local Huanan South China Seafood Market in Wuhan, Hubei Province, China in December 2019 (Zhu ., et al 2020).

The WHO confirmed that the outbreak of the coronavirus epidemic was associated with the Huanan South China Seafood Marketplace, but no specific animal association was identified (WHO 2020). Within 1 month, this virus spread quickly throughout China during the Chinese New Year – a period when there is a high level of human mobility among Chinese people. the first four cases of an acute respiratory syndrome of unknown etiology were reported in Wuhan City, Hubei Province, China among people linked to a local seafood market (“wet market”) (Li., et al, 2020). Research is underway to understand more about transmissibility, severity, and other features associated with COVID-19 (cdc 2020). It appears that most of the early cases had some sort of contact history with the original seafood market (Li ., et al 2020). It was also found to be human-to-human transmission via close contact. It was suggested that the population most at risk may be people with poor immune function such as older people and those with renal and hepatic dysfunction (Li ., et al 2020). The incubation period of Covid-19 is 2 to 14 days.

Coronaviruses are enveloped single-stranded RNA viruses that are zoonotic in nature and cause symptoms ranging from those similar to the common cold to more severe respiratory, enteric, hepatic, and neurological symptoms (Zhu ., et al 2020., WHO 2020).The main transmission routes for the COVID-19: droplets transmission, contact transmission, and aerosol transmission. Droplets transmission was reported to occur when respiratory droplets (as produced when an infected person coughs or sneezes) are ingested or inhaled by individuals nearby in close proximity; contact transmission may occur when a subject touches a surface or object contaminated with the virus and subsequently touch their mouth, nose, or eyes; and aerosol transmission may occur when respiratory droplets mix into the air, forming aerosols and may cause infection when inhaled high dose of aerosols into the lungs in a relatively closed environment (Nhc. 2020,)

The symptoms of COVID-19 are fever, cough, myalgia or fatigue, pneumonia, and complicated dyspnea, whereas less common reported symptoms include headache, diarrhea, hemoptysis, runny nose, and phlegm-producing cough (cdc. 2020, Huang C. et al 2020). Patients with mild symptoms were reported to recover after 1 week while severe cases were reported to experience progressive respiratory failure due to alveolar damage from the virus, which may lead to death. Nigeria is among the countries with coronavirus with over 306 confirmed cases.

Prevention and control are in different ways, washing of hands with running water or alchohol based sanitizer, stay atleast 2m from each other (self-isolation). The president of Nigeria had issued a lockdown in 3 states to help reduce the spread of the virus. Any patient suspected to have contracted the virus is isolated to allow its immune system to fight the virus since there is no cure and also to prevent further spread to others.

References

Accessed 5 April 2020.

CDC. 2019 Novel coronavirus, Wuhan, China. 2020. [https://www.cdc.gov/coronavirus/2019-nCoV/summary.html. Accessed 5 April 2020](https://www.cdc.gov/coronavirus/2019-nCoV/summary.html.%20Accessed%205%20April%202020).

Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. N Engl J Med. 2020. <https://doi.org/10.1056/NEJMoa2001316>.

National Health Commission of People’s Republic of China. Pneumonia diagnosis and treatment of 2019-nCoV infection from Chinese NHC and CDC 2020. Accessed 5 April 2020.

National Health Commission of People’s Republic of China. Prevent guideline of 2019-nCoV. 2020. <http://www.nhc.gov.cn/xcs/yqfkdt/202001/bc661e49b5bc487dba182f5c49ac445b.shtml>. Accessed 5 April 2020.

WHO. Coronavirus. 2020. <https://www.who.int/health-topics/coronavirus>. Accessed 5 April 2020.

WHO. Novel Coronavirus-Japan (ex-China). 2020. <https://www.who.int/csr/don/17-january-2020-novel-coronavirus-japan-ex-china/en/>. Accessed 5 April 2020.

WHO. Novel Coronavirus–China. 2020. <https://www.who.int/csr/don/12-january-2020-novel-coronavirus-china/en/>. Accessed 5 April 2020.

WMHC. Wuhan Municipal Health and Health Commission’s Briefing on the Current Pneumonia Epidemic Situation in Our City. 2020. <http://wjw.wuhan.gov.cn/front/web/showDetail/2019123108989>.

Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A novel coronavirus from patients with pneumonia in China, 2019. N Engl J Med. 2020. <https://doi.org/10.1056/NEJMoa2001017>.