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MEDICAL SCIENCES

TREATMENT OF COVID-19 WITH NON-STEROIDAL
ANTI-INFLAMMATORY DRUGS

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Coronavirus (COVID-19) is a highly pathogenic illness with large RNA genomes caused by a coronavirus variant known as SARS-CoV-2 (V'kovski et al., 2021; Wu et al., 2020). Despite the origins of SARS-CoV-2 virus being suspected to be in Wuhan in Southern China, its spread has reached many countries (Amanat & Krammer, 2020). The aim of this article is to explore other therapeutic measures in covid-19 treatment apart from vaccines. The key symptoms of covid-19 include loss of taste or smell, continuous cough, and a high temperature (Gautier & Ravussin, 2020).

However, confirmation of covid-19 diagnosis usually entails the collection and testing of the nasopharyngeal saliva samples or blood sample to establish either presence or absence of coronavirus RNA or its antibodies (Alizargar et al., 2020). The most preferred diagnostic method for covid-19 disease is the polymerase chain reaction (PCR), mainly because it is more sensitive and highly specific when compared to other methods and can be used on multiple biological samples including bone marrow, skin tissue, and blood (Lachaud et al., 2000). This ensures that covid infections are detected very early in the affected patients (Behzadbehbahani et al., 1997). Although according to the World Health Organization (2021), the worldwide prevalence of covid-19 disease has caused an estimated 3.3 million deaths and 162 million confirmed coronavirus infections, efforts by different health agencies have

managed to vaccinate at least 1.2 billion people.

In exploring other available therapeutic options for covid-19, this article seeks to explore the link between non-steroidal anti-inflammatory drugs (NSAIDs) and the treatment of covid-19 symptoms (Meizlish et al., 2021). COVID-19 is an illness caused by zoonotic coronavirus, belonging to the family of Severe Acute Respiratory Syndrome (SARS) viruses (Lin et al., 2020; World Health Organization, 2020). Although coronavirus has been widely seen as an anthroponotic disease that rapidly spreads through human contact (Edwards & Santini, 2020), some studies suggest that a genetic analysis of the origin of the SARS virus indicate that it is likely to have originated from bats (Mahase, 2020; Shereen et al., 2020).

Early last year, the French Health Ministry advised health professionals against the use of NSAIDs on people with suspected covid-19 symptoms. This advice stemmed from an incident where four young covid-19 patients with no prior health problems developed worsening covid-19 symptoms following the use of Ibuprofen, an NSAID (Day, 2020). On the other hand, a case report by Oxley et al. (2020) analysed five cases of severe acute covid-19 patients below the age of 50 years old at a New York City hospital, who were found to have stroke of the large blood vessel. Although these patients exhibited covid-19 symptoms such as persistent fever, headache, and cough; one of the cases developed dysarthria with numbness of the limbs in less than 28 hours which was investigated and confirmed with a computed tomography (CT) scan.

Because covid-19 is linked to increased risk of thromboembolism and hypercoagulability in severely ill patients, a cohort study of 412 hospitalised covid-19 patients by Chow et al. (2020) suggested that the use of Aspirin may be linked with enhanced patient outcomes. However, it is important to note that the sample used in this study is small which could limit its' accuracy.

To establish any presence of causal link between aspirin and covid-19 treatment outcomes, a randomized controlled trial should be carried out. Despite the identified weakness of Chow et al.'s (2020) study, Zhou et al. (2020) in their retrospective cohort study emphasise that vascular endothelial dysfunction and

coagulopathy are known covid-19 complications. Because evidence indicate that Aspirin acts as an antithrombotic against acetylate cyclooxygenase-1 (COX-1), reducing platelet aggregation; it could be used to lower the risks associated with coagulation in covid-19 patients.

In their two-month retrospective study in Yichang hospital, Liu et al. (2021) conducted a case-control analyses of 24 pairs of covid patients where the mortality rates were compared between aspirin therapy group and non-aspirin therapy group. Their finding was that the use of low-dose aspirin medication (100 mg/day) on covid patients was linked to lower risk of mortality compared with non-aspirin users, however there was insignificant difference in the disease duration between the two groups. In conclusion, although a few studies have attempted to explore the beneficial effects of aspirin in reducing the impact of covid-19 disease, their population sample sizes are small and therefore more studies with larger patient samples are required to carry out randomised controlled trials (RCTs) on covid-19 patients. Such studies may offer a better insight and reliable study results of aspirin in enhancing patients' mortality.

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