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A Review on Prevention, Treatment and Potential Mechanism of Honey Against Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)

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Structured Abstract

Background: In December 2019, the novel coronavirus disease (COVID-19) outbreak originated in Wuhan City Hubei Province, China, swiftly spreading worldwide. This prompted efforts to find solutions for treating the associated symptoms and disease. While the intermediate source of origin and human transfer remains controversial, there is clear evidence of rapid human-to-human transmission. Globally, concerns about vaccine safety have led to some hesitancy, towards the unknown side effects tied to factors such as age, gender, and the specific vaccine received. This leads to the exploration of alternative treatments and preventive measure in mitigating this pandemic crisis.

Methods: Honey, rich in nutrients and antioxidants, has shown effectiveness against viral infections due to its antioxidant and anti-inflammatory properties. Honey may help COVID-19 patients by not only fighting the virus but also enhancing the immune system and improving other health conditions.

Results: The review compares the antiviral activities and benefits of different types of honey, such as Manuka, Tualang, and Chestnut honey, in managing COVID-19 symptoms. Manuka honey is notable for its high methylglyoxal (MGO) content, which has shown strong antiviral effects against various viruses, including SARS-CoV-2. Tualang honey, rich in phenolic compounds and flavonoids, appears effective in relieving respiratory symptoms and boosting the immune system. Chestnut honey, despite its beneficial compounds, has shown less impact on COVID-19. Honey works by altering viral structures, blocking viral entry into cells, and modulating immune responses.

Conclusion: In conclusion, honey, particularly Manuka honey, shows promising potential as a natural remedy for COVID-19. Its diverse mechanisms of action, combined with its antiviral, anti-inflammatory, and immune-boosting properties, position honey as a valuable complementary treatment in the ongoing fight against the pandemic. However, more comparative studies and clinical trials are necessary to establish robust evidence and guidelines for its use.

Keywords: COVID-19, Chestnut honey, Manuka honey, Tualang honey

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