https://doi.org/10.22502/jlmc.v8i1.355

Editorial

Coping with COVID-19

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Severe acute respiratory syndrome corona virus (SARS-CoV-2) virus made its first appearance in Wuhan, China in December 2019. It has since spread like a wild fire across the globe with over five million corona virus disease (COVID-19) confirmed cases and almost three hundred fifty thousand deaths at the time of writing this article. This could however be only the tip of the iceberg considering the contagious nature of the SARS-CoV-2 virus and the rate at which it is spreading across the globe.

China did well to contain the virus with strict lockdown measures, sealing the affected areas, active case finding, tracing, tracking and treating the COVID-19 cases at an astonishing speed. In the absence of specific treatment available as yet, treatment consists of mainly symptomatic management with some experimental medications. Antivirals, specifically Remdesivir has been a strong candidate for the treatment of COVID-19.[1,2] However, it has yet to receive universal acceptance for the treatment of COVID-19. Chloroquine and Hydroxychloroquine seem to be effective in limiting the replication of SARS-CoV-2 virus in vitro.[3] COVID-19 is highly pandemic in countries where malaria is least prevalent and least pandemic in countries where malaria is highly prevalent. These findings suggest the hypothesis that anti-malarial drugs have efficacy in the treatment of COVID-19. [4,5] Addition of zinc is believed to improve the efficacy of chloroquine and hydroxychloroquine against SARS-CoV-2.[6] Ivermectin inhibits SARS-CoV-2 in vitro up to 48 hours. However, the concentration resulting in 50% inhibition was found to be 35 times higher than the maximum plasma concentration after oral administration of the approved dose of Ivermectin when given fasted.[7] Vitamin D lowers the viral replication rate and reduces the plasma concentration of pro-inflammatory cytokines which produce inflammation that injures the lining of the lungs, leading to pneumonia. This could possible reduce the risk of infection and death in COVID-19.[8,9]

Plasma from patients recovered from COVID-19 that contains antibodies against SARS-CoV-2 virus has shown promising results in patients with severe COVID-19.[10] This combined with moderate dose of corticosteroids might improve the outcome which might accelerate the recovery from COVID-19.[10] However, use of corticosteroids for the treatment of COVID-19 is still far from standard practice.

With this perspective regarding treatment of COVID-19, prevention seems to be the only viable option against the disease. Vaccine against COVID-19 is being developed in several countries in the world with variable success.[11] However, it is unlikely that it will be available any time soon for routine use. Alternative strategy would be to allow the SARS-CoV-2 to spread to increase herd immunity of the population. Given that the Case Fatality Rate (CFR) can be anything between 0.25-3% or even more of a country's population, the estimated number of people who could possibly die from COVID-19 may be difficult to anticipate.[12]

We are now back to square one. The preventive measures at present are still basically lockdown, physical distancing, frequent hand washing and

Submitted: 24 May, 2020
Accepted: 28 May, 2020
Published: 01 June, 2020

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How to cite this article:
Nepal BP. Coping with COVID-19. Journal of Lumbini Medical College.2020;8(1):2 pages. DOI: https://doi.org/10.22502/jlmc.v8i1.355 Epub: 2020 June 01.

universal use of face mask along with vigorous testing, tracing, tracking and treating COVID-19. If measures like work from home, distant education and public health awareness regarding the importance of physical distancing, hand washing and universal use of face mask were effectively communicated to the public and rigidly enforced, it would lead to decrease in the number of infected cases each day leading to flattening of the curve. These measures would prevent overwhelming of the scarce health care facilities and would also help in lifting draconian measures like lock down for a long time. However, work from home and distant education have logistic and realistic problems in low income country like Nepal. As public health authorities consider lifting lockdown, it is critical that robust surveillance is put in place. Aim of surveillance should be to limit the spread of disease, manage the risk of COVID-19, enable economic and sociable activities to resume to the extent possible and monitor the long-term trend of COVID-19 transmission.[13]

Conflict of interest: The author declares that no competing interest exists.

Funding: No funds were available for the study.

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