Letter to the Editor

Could vitamin C improve the therapeutic effect of integrated medicine for COVID-19?

Siukan Law *1, Dawn Chingtung Au 1, Albert Wingnang Leung 2, Chuanshan Xu 3

1- Faculty of Science and Technology, The Technological and Higher Education Institute of Hong Kong, Tsing Yi, New Territories, Hong Kong.
2- School of Graduate Studies, Lingnan University, Tuen Mun, New Territories, Hong Kong.
3- Key Laboratory of Molecular Target and Clinical Pharmacology, State Key Laboratory of Respiratory Disease, School of Pharmaceutical Sciences and Fifth Affiliated Hospital, Guangzhou Medical University, Guangzhou 511436, China.

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Dear Editor

Recently, a paper published by Yang et al. that combined the therapy of Western medicine, traditional Chinese medicine, and a high dose of vitamin C resulted in the most effective outcome for flight against COVID-19. It’s shortening the time of disease recovery, symptom disappearance, chest CT improvement, and tongue amelioration [1]. Traditional Chinese medicine such as Bai-Nu decoction, and Buzhong Yiqi decoction possessed anti-inflammatory, anti-oxidant properties, which improved the properties of western medicines added by increasing the white blood cell count and lymphocyte count supplement with vitamin C for combating COVID-19 [2].

The western medicines that are commonly used include (i) alpha-interferon (5 million U or equivalent dose each time for adults and twice daily), (ii) lopinavir/ritonavir (200 mg/50 mg per pill for adults, two pills each time and twice daily), ribavirin (jointly with interferon or lopinavir/ritonavir, 500 mg each time for adults, and twice or three times of intravenous injection daily), chloroquine phosphate (500 mg for 7 days, adults aged 18-65 with body weight over 50 kg), and arbidol (200 mg for adults, and no longer than 10 days) [3].

What is the important role of vitamin C? Farjana et al. reported that vitamin C alleviated complications associated with COVID-19 because of the antioxidant to anti-microbial functions, which prevented inflammation, oxidative stress, and autophagy disordered, as well as immune dysfunction [4]. Huang et al. also indicated vitamin C as an essential vitamin for the human immune system, which enhanced the body's immunity to viruses in a high dosage of vitamin C [5]. Meanwhile, Hemilä et al. described vitamin C resistance of chick embryo tracheal organ cultures to an infection caused by the avian coronavirus [6]. Its mechanism was quite similar to the prevention of COVID-19.

The above information demonstrates that vitamin C improves the therapeutic effect of integrated medicine for COVID-19. It is a safe and inexpensive essential nutrient, that is supplementary to Chinese and western medicines with an excellent safety assessment in the human body during past investigations.
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All authors contributed to the concept, acquisition and analysis of data, drafting of the article, and critical revision for important intellectual content.

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