Farhana ahmed
Assistant Professor, Department of Cardiology
National Institute of Cardiovascular Diseases

The Corona virus disease 2019 (COVID-19) pandemic developed into an unprecedented global public health crisis.

The current treatment of COVID-19 has been limited to general supportive care, with provision of critical care as no approved therapies or vaccines are available. Classical and historical interventions Convalescent plasma (CP) therapy have remerged as options for the control of disease.

In early 20th century it was used to treat diphtheria (Nobel prize winning work) and Spanish flu successfully and recently used in SARS, MERS, and Ebola outbreak.

CP therapy provide passive immunization where neutralizing antibody (Nabs) that restrain the infection. The efficacy of this therapy has been associated with the concentration of NAbs in plasma from recovered donors.

Real world scenario for Covid 19 treatment:

Due to scarcity of clinical data for the studies involving COVID-19, this will be a problem when predicting treatment outcomes.

Recently a systematic review1 was done to evaluate available data for the clinical effectiveness of convalescent plasma for the treatment of COVID-19. Review included studies except one (South Korea) were conducted in China. In five studies, the male patients (n = 15) were larger in number than the female patients (n = 12). The age of the patients across the different studies varied from 28 to 75. All studies reported unanimously positive findings of zero mortality after patients received CPT in varying doses. However, it was not clearly determined that whether the high percentage of survival was due to the treatment of patients with multiple other agents.

Important issue to remember is that not everyone's plasma can be given.

Currently, convalescent donors between 18 and 65 are considered as subjects without infectious symptomatology and a negative test for COVID-19 after 14 days of recovery. These tests must be repeated 48 h later and at the moment of donation. CP should be safe and must have enough antibody (recommend neutralizing antibody titers of at least 1:160.)[2]

CP production requires high quality standards, it must be free of any infection, so tests for human immunodeficiency virus (HIV), hepatitis B, hepatitis C, syphilis, human T-cell lymphotropic virus 1 and 2, and Trypanosoma cruzi (if living in an endemic area) should be

carried out[2]

Not every patient need to receive CP therapy.

Health care provider can consider CP therapy for laboratory confirmed COVID-19 with Severe or immediately life-threatening infection.

There is not a standard transfusion dose of CP.

In different studies for coronaviruses the administration of CP ranges between 200 and 500 mL in single or double scheme dosages. Currently, the recommendation is to administrate 3 mL/kg per dose in two days[3]

CP therapy is not a magic tool.

But it could be a valid option of treatment and at the same time use should be judicial and the use must be carried out as part of a clinical trial to assess the efficacy of the intervention and to measure immune responses. It may be advisable to consider an adaptive design to adjust for rapid generation of new evidence in this pandemic, to evaluate effective neutralizing titer and timing of administration.

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2. Tiberghien P., de Lambalerie X., Morel P., Gallian P., Lacombe K., Yazdanpanah Y. Collecting and evaluating convalescent plasma for COVID-19 treatment: Why and how. Vox Sang. 2020 doi: 10.1111/vox.12926.

3. Bloch E.M., Shoham S., Casadevall A., Sachais B.S., Shaz B., Winters J.L. Deployment of convalescent plasma for the prevention and treatment of COVID-19. J Clin Invest. 2020 doi: 10.1172/JCI138745.