

CONVALESCENT PLASMA THERAPY FOR COVID-19

Relevant for: Developmental Issues | Topic: Health & Sanitation and related issues

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Convalescent plasma treatment involves injecting the COVID-19 patient with convalescent sera of people who recovered from the infection recently. The patient cured of the disease will have antibodies that drive coronavirus away, says the report of the WHO-China Joint Mission on COVID-19.

The serum of COVID-19 cured individuals will have virus-neutralising antibodies which will act as a passive antibody therapy. It is called convalescent sera of COVID-19.

We can collect it in two ways:

(i) Using routine blood withdrawal followed by centrifuge technique. Here we can collect 180 ml to 220 ml of convalescent sera and we can store it in -60 degree C up to one year.

(ii) Using apheresis machine/cell separator machine, we can collect even 600 ml of convalescent sera at one time and safely store for a year.

Those who are suffering from SARS-CoV-2 infection with moderate/severe sepsis with or without ventilator support.

At present, there is no available literature in the World. Based on our previous experience (more than 5 years in hepatitis B virus), I would recommend 180 ml to 220 ml of convalescent sera of COVID 19, once a day for a minimum three to five consecutive days.

The process of removal of abnormal substances from circulation which are either present in plasma or are tightly bound to plasma proteins is known as therapeutic plasma exchange. In COVID-19 patients, their plasma will contain enormous inflammatory mediators which cause severe lung injury.

Based on previous experiences with other diseases, in COVID-19 severe cases, a combination of therapeutic plasma exchange technique using convalescent sera will reduce the "cytokine storm" which will help recovery.

Advantages of the therapy are that it is the viable option in our healthcare system; it is quickly doable and there are no major side effects. The most important thing is that convalescent sera is easily transportable to any part of the country/worldwide by maintaining adequate cold-chain process similar to vaccine

Adding therapeutic plasma exchange in tertiary care centres using convalescent sera of COVID-19 will be the more effective way of therapy in COVID-19 patients.

Dr. Varghese has been working in the field of plasma exchange therapy for over five years

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As many as 284 districts have at least one COVID-19 case

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