



Frequently Asked Questions about Convalescent Plasma (CP) - Version.1

Brig Retd Nuzhat Mushahid, Dr Syed Muhammad Irfan

Written on behalf of Pakistan Society of Haematology (PSH)

Q.1 What is convalescent Plasma (CP)?

Ans.1 This is the plasma (the fluid part of the blood) which is extracted from individuals who have satisfactorily recovered after COVID 19 infection.

Q.2 How effective is CP for treatment for Corona?

Ans. 2 At this point of time nobody knows for sure. CP therapy is an experimental treatment. At present there is uncertainty about which type of patients best benefit from it. Since no definite drug therapy has been found so far to cure the covid 19 disease, caused by SARS-Corona Virus2, therefore CP is also being tried because CP has historically been tried in other viral illnesses as well although with mixed results. In future some drugs under trial now, may prove to help patient recover from covid19 and prove better choice compared to CP.

Q.3 How do doctors prove that some drug or CP helps?

Ans.3 Doctors need to adopt well established scientific methods to prove that drugs or CP helps. These are experimental studies called Randomized Controlled Trials (RCT) which must be carried out to prove that any drug or plasma therapy is both effective and safe. Without undertaking these well planned studies, no claims or data of any sort have any validity and cannot be used to recommend treatment. This can mislead people and cause more harm than benefit.

Q.4 Has somebody done such Trials anywhere in the world? And what are results

Ans. 4 Many countries are currently doing these trials of CP but results are not yet available. One such trial from China has not categorically proven benefit for all patients especially ones who are seriously sick and on ventilator and late in the disease. Another study from Mount Sinai Hospital USA stated that CP helped patient from worsening before they were placed on ventilator and not afterwards. What would be optimum time and parameters to predict this are also not known for sure. More results from other countries are anxiously awaited by everyone.



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Q. 5 What is happening in Pakistan?

Ans. 5 There is information about one RCT being done in AKUH Karachi and results are not yet available. All other studies being done in country are NOT RCTs so their results cannot be taken as a robust proof as that of a RCT. Sometimes less robust studies are undertaken on compassionate basis, especially when no effective treatments are proven beyond doubt. That is why it needs approval of ethical committees and healthcare authorities. Ministry of National Health Services Regulations and Coordination, Government of Pakistan has posted guidelines for CP therapy on its official website. It also has information for general public.

Q.6 How do I interpret what you are telling? Does it mean that nobody should be using CP at all? People are so desperate and we have heard so much on media about it. I am confused

Ans. 6 No doctor or scientist is ruling out its efficacy yet. It should be clearly understood that only those institutions and hospitals that have planned RCTS and other types of studies, have the experts who know best about whom to give CP, when to give, how to give and how to make sure that plasma does not carry other disease like Hepatitis and AIDS, should only be offering CP treatment. If it is being done by people in non-qualified settings then the patients are being put in harms way.

Q. 7 What is there in the plasma which is likely to benefit the patient with COVID-19?

Ans.7 Convalescent Plasma has antibodies called, virus neutralizing antibodies, that neutralize the virus or suppress its multiplication and this buys time for the patients to make their own immunity work against the virus.

Q. 8 Are there any specific tests that will find out that the plasma of the donor can help?

Ans.8 Yes, it is called Anti Covid-19 antibody test. This has to be done before donation to verify the presence of IgG antibodies. There is definite quantity of these antibody that has to be present before we are confident that CP might help. It is the pathologist job in laboratories to test for these and quantitate them. This is very well defined in the protocols that doctors use. If the test method and kit is not of good quality then results are unreliable. If general



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public does not know this point then it can be exploited by indiscreet elements in the society.

Q. 9 I know blood can transmit diseases. What are ways to prevent these and not get infected after CP?

Ans. 9 You are right. Diseases like Hepatitis B, Hepatitis C, AIDS and syphilis can be transmitted through blood and plasma. Therefore, it is very important that these are tested with best methods available. These methods are called CLIA and NAT. Not all centers and blood banks attain such a standard of testing and this can pose risk of disease transmission with CP. Another important point to remember is that a donor who sells his plasma for money is not volunteer and most likely will not answer questions honestly which are routinely asked to assess the risk. Since some of eligible donors have recently undergone hospitalization therefore, they have more risk than someone who has not been hospitalized.

Q. 10 Who can donate CP?

Ans.10 Usually it can be donated by any one, who has recovered from disease and is symptom free for at least two weeks and is clinically fit and finally tested negative for COVID-19 infection by PCR. If this second PCR was not done then 28 days after recovery will make him or her eligible, provided antibodies are present.

Q. 11 How much and how frequently the patients should receive CP?

Ans.11 First of all, it should be clear that quantity of CP is defined in the protocols of the hospitals and the doctors have to strictly follow their hospital protocols and non-experts should comply with the recommendations. You will have to ask the treating doctor about their hospital's practice and protocol.

Q. 12 Who are the patients in whom plasma therapy is likely to be beneficial and at what stage, it is used?

Ans 12 From results reported so far it is very obvious that patients on vent, especially for more than a week, do not benefit because it is not the virus directly killing the patient but the effects of patients own immune response that kills. In this situation plasma cannot help. What is the right time to give CP is also not exactly known and everyone is waiting for the results of RCTs that can best



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answer it. It appears that there is not much difference in death rate of patients who received CP and those who do not. Attaching too much hopes or too much pessimism with this therapy has no solid grounds yet and informing about this is responsibility of treating doctor. It would be unethical for doctor to raise expectations of relatives and patients beyond what is known so far.

Q. 13 What is the cost of the procedure?

Ans.13 Many centers are providing free of cost while others are charging. Actual cost is estimated around 30,000 rupees if plasma is obtained with automated apheresis procedure and tested for infections with NAT test. If plasma is split into 2 or 3 parts then cost of one part will still be lower. It is important that plasma is obtained from volunteers and no one should pay any amount to donor.

Q. 14 Are there any side effects of giving plasma?

Ans.14 Yes, it is never 100% safe. Possible reactions include allergic and febrile reactions that may be easy to manage. Life-threatening reactions can occur which include acute lung injury and fluid overload and can be fatal. Transmission of diseases like Hepatitis and AIDS can also occur.

Q. 15 How to assess that patient has improved with CP?

Ans.15 The treating specialists and doctors follow a protocol which clearly states what to check and when to check. You should inquire from them. It is possible that patient has responded to CP after receiving it, or to other treatments being given simultaneously or because of own immunity. There is no specific test to predict that patient will benefit from CP.

Q. 16 How much plasma is extracted from the donor? And how much time is needed?

Ans.16 Usually it is 400 ml to 800 ml with apheresis collection and is determined by the blood bank staff. The procedure takes 2 hours. It is important that donor meets all fitness criteria for donation including all testing before procedure.



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Q. 17 How is plasma extracted?

Ans.17 Donor lies on couch with a needle inserted in arm and is connected with apheresis machine. Blood goes in the machine after mixing with fluid that prevents clotting, plasma is extracted from the blood and rest of the blood goes back to donor's body.

Q. 18 How frequently donor can donate plasma

Ans.18 Depending on the donor willingness and need for plasma, he is eligible to donate every 28 days. Some countries allow it to be collected more frequently.

Q. 19 Is it a safe procedure for the donor?

Ans.19 Yes absolutely. Sometimes there may be symptoms of nervousness or low calcium, in some donors. It is not only patients health that we have to look after but that of donor as well and donor safety is also the responsibility of doctors.

Q. 20 Do donors need to have rest / any medication after donation?

Ans. 20 Not specific recommendation after standard donation. Donor should be encouraged to take ample water/juices / drinks before donation and walk out of blood bank safely after procedure. Following of advice by blood bank staff is important.

Q. 21 Is it mandatory to give group specific plasma?

Ans.21 Its standard practice to give group identical blood product. With respect to plasma there is no consideration of positive or negative group. Only asking for A, B, O or AB is good enough. AB plasma is universal donor and can be safely given to any other group. At times group compatible plasma may be given rather than group identical. The table below explains it

FFP / Convalescent Plasma:

BLOOD GROUP	GROUP IDENTICAL	1 ST ALTERNATE	2 ND ALTERNATE
A	A	AB	B
B	B	AB	A
AB	AB	A	B
O	O	A or B	AB



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Q. 22 Can a person who has been in quarantine donate plasma at appropriate time.

Ans.22 Yes, as per criteria stated above.

Q. 23 Should plasma be from the family donors only?

Ans.23 No. It can be from any male donor meeting the criteria. Plasma from female with children are to be avoided.

Q. 24 For how long we can store the CP?

Ans. 24 Plasma can be frozen for up to 3 years at minus 30°C. But for CP plasma it can be placed at 4°C for 24 hours and then transfused. If to be transfused later then it should be frozen.

Q. 25 Can Covid -19 patients donate blood at recommended interval like random blood donor and their plasma be transfused to appropriate patient for passive immunisation?

Ans.25 Yes. The quantity of plasma in this type of whole blood donation is around 200 ml and it can be given to patients as defined in protocol. The donor will not be able to make another donation for 3 months at least.

Q. 26 Are there any other requirements for donor?

Ans.26 Yes, consent, contact, personal information and answer to health questionnaire by the blood bank.

Q. 27 Where can I find more information about CP?

Ans 27 Please visit <http://covid.gov.pk/> for all updated information on covid-19