भारतीय आयुर्विज्ञान अनुसंधान परिषद
स्वास्थ्य अनुसंधान विभाग, स्वास्थ्य और परिवार
कल्याण मंत्रालय, भारत सरकार
Indian Council of Medical Research
Department of Health Research, Ministry of Health
and Family Welfare, Government of India

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Evidence Based Advisory to address Inappropriate Use of Convalescent Plasma in COVID-19 Patients

- Convalescent Plasma Therapy (CPT) or passive immunotherapy has been tried in the past for treatment of viral infections like H1N1[1], Ebola[2] and SARS-CoV-1[3] etc.

- Benefits of CPT in improving the clinical outcomes, reducing severity of disease, duration of hospitalization and mortality in COVID-19 patients are dependent on the concentration of specific antibodies in convalescent plasma that could neutralize the effects of SARS-CoV-2.

- ICMR conducted an open label phase II multicentre randomised controlled trial across 39 public and private hospitals on use of convalescent plasma in the management of moderate COVID-19 in adults in India (PLACID Trial). It was concluded that CPT DID NOT LEAD TO REDUCTION IN PROGRESSION TO SEVERE COVID-19 OR ALL-CAUSE MORTALITY in the group that received CPT as compared to the group that did not receive CPT[4].

- PLACID is the WORLD'S LARGEST PRAGMATIC TRIAL on CPT conducted in 464 moderately ill laboratory confirmed COVID-19 affected individuals in real world setting wherein no benefit of use of CPT could be established.

- Similar studies conducted in China and Netherlands have also documented no significant benefit of CPT in improving the clinical outcomes of hospitalised COVID-19 patients[5,6].

- It is speculated that convalescent plasma having low concentration of specific antibody against SARS-CoV-2 may be less beneficial for treating COVID-19 patients as compared to plasma with high concentration of such antibodies.

- Indiscriminate use of CPT is not advisable.

- CPT therefore should only be used as advised by ICMR NTF for COVID-19 when specific criteria as specified below are met.

Box 1: Decision Matrix

Potential donor		Potential recipient
Who can donate - **Men** - **Women who have never been pregnant**		In early stage of COVID-19 disease
Appropriate Age **18-60 year**		3-7 days from onset of symptoms, but not later than 10 days
Appropriate Body Weight **>50 kg**		No IgG Antibody against COVID-19
Diagnosis **COVID-19 RT-PCR positive or Rapid Antigen Test positive**		Informed Consent
Physical Status **After 14 days of symptom resolution[7] (testing negative for COVID-19 is not necessary)**	**Convalescent Plasma Therapy**	
Screening to rule out ABO incompatibility & blood borne pathogens[8] - **HIV** - **HBV** - **HCV etc.**		
Required Concentration - **IgG antibody against COVID-19 Titre of 1:640 (ELISA)** **OR** - **13 AU (Arbitrary Unit)/mL[9] (CLIA)** **OR** - **Neutralising Antibody Titres of 1:80 (PRNT/MNT)**		

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