

ISOT Consensus Statement for the Kidney Transplant Recipient and Living Donor with a Previous Diagnosis of COVID-19

Introduction

The National Organ and Tissue Transplant Organization (NOTTO) has previously published transplant-specific guidelines with reference to coronavirus disease 2019 (COVID-19).^[1] In India, the mortality rate is higher in dialysis patients with COVID-19 (12%–30%) than in posttransplant COVID-19 patients (11.3%), and both are higher than in the general population (<2%).^[2–5] With the resumption of kidney transplant program in various parts of India, new issues are expected to arise. There is uncertainty regarding the safety of performing kidney,^[6–8] liver,^[9–12] or lung^[13] transplantation in a recipient recently recovered from COVID-19. At present, we have limited evidence-based information about the safety and feasibility of kidney transplantation from living donors who have recovered from COVID-19.^[14] Recently, Indian multicenter cohort studies have reported successful kidney transplantations in recipients from living donors with a previous diagnosis of COVID-19.^[15,16]

Guidelines of Other Professional Societies

The American Society of Transplantation (AST) recommends that the patient who recovered after COVID-19 should be asymptomatic and should preferably have two negative SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) *polymerase chain reaction* (PCR) tests done at least 24 hours apart in view of the limited sensitivity (70%) of a single test, although the optimal timing of multiple tests is unknown.^[17–20] The American Society of Anesthesiologists and Anesthesia Patient Safety Foundation Joint Statement

on elective surgery and anesthesia for patients after COVID-19 infection suggests a waiting time from the date of COVID-19 diagnosis to surgery as follows:

- four weeks for an asymptomatic patient or one who has recovered from only mild, nonrespiratory symptoms;
- six weeks for a symptomatic patient (e.g., cough, dyspnea) who did not require hospitalization;
- eight to 10 weeks for a symptomatic patient with comorbidities such as diabetes, immunocompromized state, or hospitalization; and
- twelve weeks for a patient who was admitted to an intensive care unit due to COVID-19 infection.^[20]

The United Network for Organ Sharing/American Society of Transplantation suggests proceeding for transplant from a previously infected potential donor if

- the timing is between 21 and 90 days from initial symptoms,
- the symptoms have resolved, and
- an infectious disease expert is consulted.^[21]

The National Institute for Clinical Excellence guidelines for live donors with recovered COVID-19 infection recommend deferring transplants for 28 days and 14 days of comprehensive social distancing and hand hygiene measures. Donation should resume only after the donor is clinically asymptomatic and has negative nasopharyngeal swab test result for nCoV (novel coronavirus) 2019 and another negative test within 3 days before donation.^[22] The NOTTO guidelines suggest accepting a donor with a previous diagnosis of COVID-19 with documented two negative COVID-19 tests and complete symptom resolution for 28 days and another negative test at the time of donation.^[1]

Vivek B. Kute,
Sandeep Guleria¹,
Anil K Bhalla²,
Ashish Sharma³,
SK Agarwal⁵,
Manisha Sahay⁶,
Santosh
Varughese⁷,
Narayan Prasad⁸,
PP Varma⁹,
Sunil Shroff¹⁰,
Harsh Vardhan¹¹,
Manish Balwani¹²,
Shruti Dave¹³,
Dhamendra
Bhadoria⁸,
Manish Rathi⁴,
Dhananjay
Agarwal¹⁴,
Pankaj Shah¹⁵,
Jai Prakash¹⁶

Department of Nephrology, Institute of Kidney Diseases and Research Center, Dr HL Trivedi Institute of Transplantation Sciences, Ahmedabad, Gujarat, ¹Department of Transplantation Surgery, Indraprastha Apollo Hospital, New Delhi, ²Department of Nephrology, Sir Ganga Ram Hospital, New Delhi, ³Departments of Transplantation Surgery and ⁴Nephrology, Postgraduate

Received: 13-03-2021

Accepted: 29-03-2021

Published: 11-05-2022

Access this article online

Website: www.indianjnephrol.org

DOI: 10.4103/ijn.ijn_120_21

Quick Response Code:



How to cite this article: Kute VB, Guleria S, Bhalla AK, Sharma A, Agarwal SK, Sahay M, *et al.* ISOT consensus statement for the kidney transplant recipient and living donor with a previous diagnosis of COVID-19. *Indian J Nephrology* 2022;32:288-90.

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Institute of Medical Education and Research (PGIMER), Chandigarh, ⁵Department of Nephrology, All India Institute of Medical Sciences, New Delhi, ⁶Department of Nephrology, Osmania Medical College, Hyderabad, Telangana, ⁷Department of Nephrology, Christian Medical College, Vellore, Tamil Nadu, ⁸Department of Nephrology, Sanjay Gandhi Postgraduate Institute of Medical Sciences (SGPGI), Lucknow, Uttar Pradesh, ⁹Department of Nephrology, Primus Super Speciality Hospital, Delhi, New Delhi, ¹⁰MOHAN Foundation, Chennai, ¹¹Department of Nephrology, Patna Medical College, Patna, Bihar, ¹²Department of Nephrology, Jawaharlal Nehru Medical College, Sawangi, Wardha, Maharashtra, ¹³Department of Pathology, IKDRC-ITS, Ahmedabad, Gujarat, ¹⁴Department of Nephrology, SMS Hospital, Jaipur, Rajasthan, ¹⁵Department of Nephrology Gujarat University of Transplantation Sciences, Ahmedabad, Gujarat, ¹⁶President, Indian Society of Organ Transplantation, Former Professor and Head Nephology Banaras Hindu University, Varanasi, Uttar Pradesh, India

Address for correspondence:

Dr. Vivek Kute,

Professor, Nephrology and Transplantation, Institute of Kidney Diseases and Research Center and Dr. H L Trivedi Institute of Transplantation Sciences, Ahmedabad - 380 016, Gujarat, Secretary, Indian Society of Organ Transplantation, Lucknow - 226 014, Uttar Pradesh, India.

E-mail: drvivekkute@rediffmail.com

Consensus Statement for Kidney Transplant Recipient and Donor with a Previous Diagnosis of COVID-19

We recommend that prospective kidney transplant recipients and donors with a previous diagnosis of COVID-19 should be considered for transplantation after comprehensive pretransplant evaluation using a combination of clinical, radiologic, and laboratory criteria, with individualized risk–benefit analysis.

Based on the currently available limited data, we suggest that the kidney transplant recipient and the prospective living donor with a previous diagnosis of COVID-19 should be considered for transplantation according to the following criteria:

- A. *Regular social distancing, hand hygiene, and face mask use* after recovery from COVID-19 infection
- B. *Complete symptom resolution* for at least 28 days. The ideal disease-free interval is unknown. The appropriate length of time between recovery from COVID-19 and surgery with respect to minimizing postoperative complications should be individualized, taking into consideration the symptoms, COVID-19 severity, associated comorbidities, and the benefit–risk ratio of further delaying the surgery.
- C. Documented *two negative SARS-CoV-2 PCR tests*, including one negative test at the time of transplant surgery. This is done to avoid known false-negative rates of single PCR test in COVID-19. The two negative PCR tests should be at least 24 hours apart because of the limited sensitivity (70%) of a single test.
- D. *Normal chest imaging* by computed tomography (CT) scan within 24 to 72 hours prior to transplants
- E. Donor–recipient pair should sign *written informed consent* explaining them the individualized risk–benefit analysis, including a potential risk of COVID-19 infection because of reactivation or reinfection during hospital stay and after transplant.
- F. *Adequate screening* in pretransplant evaluation with special attention given to the cardiopulmonary system by a multidisciplinary team and a planned regular long-term *follow-up* after discharge. Enhanced frequent follow-up should be ensured by telemedicine or face-to-face as required and feasible.

We suggest using standard drugs and doses of induction and maintenance immunosuppressive drugs based on the recipient’s immune risk stratification as was being practiced before COVID-19.

We also recommend that the donor–recipient pair must be advised to continue to take safety precautions posttransplant and should get a prompt PCR testing and treatment if they have any suspicious symptoms of COVID-19 infection due to reactivation or reinfection after the transplantation.

We recommend that the transplant recipients and their household members should be vaccinated with ANY coronavirus vaccine that is *authorized and approved* for use by the local health authority. The World Health Organization suggests that individuals may wish to defer their own COVID-19 vaccination for up to 6 months from the time of SARS-CoV-2 infection.^[23] The Ministry of Health and Family Welfare, Government of India, suggests that the infected individuals should defer COVID-19 vaccination for 14 days after symptoms resolution.^[24] According to the Centers for Disease Control and Prevention, there is no recommended minimum interval between recovery from the infection and vaccination. Current evidence suggests that the risk of SARS-CoV-2 reinfection is low in the months after the initial infection but may increase with time due to decreasing neutralizing antibody titers. Vaccination should be deferred for at least 90 days^[25] in people who previously received passive antibody therapy such as convalescent plasma as part of COVID-19 treatment.

Disclaimer

COVID-19 pandemic is evolving in a dynamic manner. Therefore, this consensus statement is a live and dynamic document and will require updating as per the evolving situation.

Note: This special article is being published simultaneously in the *Indian Journal of Transplantation* and the *Indian Journal of Nephrology*.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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