


LETTER TO THE EDITORS

Successful liver transplantation immediately after recovery from COVID-19 in a highly endemic area

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Dear Editors,

In September 2020, India became the second-most affected country by the COVID-19 pandemic. The pandemic has posed an immense strain on the existing healthcare infrastructure leading to shortage of ICU beds and skilled manpower. In view of the feared risk of transmission of COVID infection from donor to recipients and possible worsening of COVID infection during post-transplant period; most liver transplantation programs in India were suspended in the early phase of COVID pandemic. However, with better understanding about transmissibility of the virus and improved diagnostic assays and management of COVID patients, centres have restarted their transplant programmes.¹ In the highly endemic region of Mumbai, many wait-listed patients with chronic liver disease got afflicted with COVID-19. We report a case of successful deceased donor liver transplantation immediately after recovery from COVID-19.

A 36-year-old gentleman suffering from ethanol-related decompensated chronic liver disease, presented with persistent fever and myalgia. He tested positive for SARS-CoV-2 by real-time polymerase chain reaction (RT-PCR). He had hypoxaemia and high-resolution computerized tomogram (HRCT) chest showed features of moderate infection (CT severity score 15/25). He had increasing jaundice, ascites and new-onset hepatic encephalopathy after detection with COVID-19. He received intravenous methylprednisolone and albumin, oral diuretics and anti-encephalopathy measures. 14 days later, a repeat test for COVID-19 was negative. His model for end-stage liver disease score was 28 at

admission, peaked to 32, and reduced back to 28 at discharge. He had an unsuitable donor for living-related donor liver transplant. Within 6 weeks of recovery from COVID-19, he underwent a successful deceased donor liver transplantation surgery. The organ donor was evaluated twice over 48 hours for COVID-19 by RT-PCR from nasopharyngeal and bronchoalveolar lavage specimens. Organ donor's HRCT of chest was normal. The recipient was also re-tested for COVID-19 by RT-PCR twice (twenty-four hours apart) along with an HRCT chest. The blood bank, already strained due to shortage of blood donors, was adequately stocked in anticipation of the transplant. Postoperative immunosuppression consisted of corticosteroids, low dose mycophenolate mofetil (250 mg bid) and tacrolimus (trough level 6–8 ng/ml). Immediate graft liver function was excellent. Postoperatively, he had marginally high drain output that was managed conservatively. Low molecular weight heparin was given in a therapeutic dose. He was discharged on tenth postoperative day. Strict protocols were enforced to ensure minimization of postoperative potential re-exposure to COVID-19 through visitors and healthcare personnel.

As the patient had a high MELD score and recent decompensation of liver disease, the benefit of going ahead with the transplantation outweighed the risks involved. This case reiterates the safety of liver transplantation surgery in a patient who has recently recovered from COVID-19.^{2,3} Careful preoperative evaluation of the donor and recipient by at least two staggered RT-PCR tests and radiological imaging, taking prudent intra- and postoperative precautions to prevent possible transmission from healthcare personnel, ensuring adequate availability of blood products, drugs, devices, supplies and infrastructure, strict postoperative infection control measures and quarantine protocols and judicious management of immunosuppression postoperatively formed the cornerstones for ensuring a successful liver transplantation surgery during the peak of the pandemic.⁴

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Conflicts of interest

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