
A. Rammohan¹*, G. Narasimhan¹, V. Devarajan¹, S. Sundaramoorthy¹, I. Kaliamooorthy¹ and M. Rela¹

¹The Institute of Liver Disease and Transplantation, Dr. Rela Institute and Medical Centre, Bharath Institute of Higher Education and Research, Chennai, India.

Authors’ contributions:

This work was carried out in collaboration among all authors. Authors AR, GN and VD designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors SS, IK and MR managed the analyses of the study. Authors AR and MR managed the literature searches. All authors read and approved the final manuscript.

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Dear Editor,

An initial attempt at restarting our live-donor liver transplant (LDLT) program was aborted due to a live-donor turning unexpectedly COVID-19 positive. Over 200 healthcare workers who had come into contact with the patient at various times were tested. Despite all being negative for the contagion, they were sent into quarantine. This setback highlighted the fact that we had grossly underestimated the enormity of the task of restarting services in the midst of the pandemic. A decision was taken to stop all transplantation work till an iron-clad protocol could be formulated and applied in an algorithmic manner. A prerequisite for return to non-emergency surgery was the availability of a reliable screening test for COVID-19 [1-4]. Other components of the workflow algorithm included an assessment & timing for restarting

*Corresponding author: E-mail: ashwinrammohan@gmail.com;
services, setting up of the task force to oversee the whole process in a transparent and flexible manner, re-assessment of the resource availability, supply chain and infrastructural capabilities to handle both COVID-19 and non-COVID-19 patients and a rehaul of the whole clinical process to incorporate online clinics with virtual patient consultations. However, the game-changer in our restarting process was developing the capability for in-house RT-PCR COVID-19 testing. As a part of the work-flow protocol, COVID-19 testing for the LDLT pair (donor-recipient) was performed twice. (Fig. 1)

Fig. 1. Patient information leaflet showing the new regulations and workflow of the LDLT process
RT-PCR with a sensitivity range of 60-80% remains the current gold standard test for SARS-CoV-2 [5]. To improve this metric further, we performed the test twice, reducing the false negative rates to 4-12%. The tests were done preoperatively on both the donor and the recipient, with a minimum gap of 48 hrs. After the completion of their work-up the patients were placed on the operative list, the first COVID-19 test was done at this point. The LDLT pair were isolated at home or provided accommodation within the hospital campus and RT-PCR tested for COVID-19 again 48 hours prior to the LT. This provided the added benefit of avoiding the risk of lag-time error between the first test and the transplant. Their designated attendants were also tested for the virus.

We present our COVID-19 testing protocol which has been crucial to the restarting of our LDLT programme. We have successfully performed 46 LDLTs (22 adults and 24 paediatric) since restarting our transplant service in May. All patients are well and continued to be COVID negative at discharge. Surgery was deferred for 5 donor-recipient pairs due their COVID-19 test turning positive preoperatively. With a policy to test and protect, the simple testing protocol has allowed for an early identification and exclusion of COVID-19 positive patients. Thereby obviating the need for quarantining a large number of healthcare workers at the same time allowing for the safety of our patients and sustainability of the LDLT program through this pandemic.

CONCLUSION

Restarting elective services, in our case the LDLT program required identifying a variety of issues that represent challenges. As waitlist mortality and morbidity become prohibitively unacceptable, hospitals will need to cope with the presence of COVID-19 and find ways to work around it. This will ensure that the quality standards and the safety of workers and patients are preserved, hopefully enabling a return to the “good ol’ pre-COVID era”.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES