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Guidelines for Liver Transplantation During the COVID Pandemic in the Philippines: Joint Statement of the Philippine Association of Hepato-Pancreato-Biliary Surgeons (PAHPBS) and the Hepatology Society of the Philippines (HSP), 08 December 2020

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The world is experiencing the worst health crisis in the 21st century thus far. After the Spanish flu pandemic of 1918, which claimed an estimated 50 million lives, this SARS-CoV-2 pandemic ravaging the world now may prove to be equally detrimental, if not worse. There have been tremendous consequences not only in the health sector but in all other arenas of life as well, with perhaps greater impact in developing countries like the Philippines. National statistics report that there have been more than 405,000 infected individuals from February until early November 2020. Fortunately, the local mortality rate is low at 2%[1], close to the current worldwide death toll of 2.4%.[2]

The country was first hit in the first quarter of the year 2020 and this necessitated a total lockdown of the National Capital Region (NCR) and nearby provinces. It then suffered a second wave sometime midyear which required continued community quarantine measures. The pandemic has shifted the focus of health care delivery to COVID cases and has affected organ donation and organ transplantation as well. Transplant-related activity stopped[3,4] because priority had to be given to COVID patients and resources (ICU beds, personal protective equipment [PPEs], blood supply, pharmaceuticals, manpower) had to be channeled accordingly. Deceased donation was halted because of the challenges with SARS-CoV-2 PCR tests that could produce results in a few hours, as required in an emergency situation, and the uncertainties related to processing and procurement of organs from a deceased donor during a pandemic. The Philippine Network for Organ Sharing (PhilNOS) has remained silent throughout this health crisis. Nonetheless, patients will continue to get sick and suffer end-stage liver disease, whether it be acute or chronic illness, and therefore transplant activity must go on. Now about 9 months into the pandemic, health care providers have gained a better understanding of the pathogen and the disease it causes and therefore, have a better handle on the prevention of spread and management of the infected.[5,6] With lessons learned, it is then about time to resume transplant activity[7,8,9], keeping in mind always the safety of the patients, their families and health care workers in the quest to restore health in all those afflicted.

The Philippine Association of Hepato-Pancreato-Biliary Surgeons (PAHPBS) and the Hepatology Society of the Philippines (HSP), the lead local professional societies dedicated to liver care, have then decided to partner in drawing guiding principles in the practice of liver transplantation during the COVID pandemic, which is far from over. The following recommendations are

hereby put forth to guide the resumption of adult and pediatric liver transplant activity in the country in these crucial times:

1. Liver transplantation (LT) is a life-saving procedure and must, therefore, be given priority. Liver transplant activity should continue unabated provided that the necessary resources to carry out a transplant can be ensured, i.e. ICU beds, appropriate PPEs, blood product availability, trained personnel.

2. Only accredited/experienced programs may continue LT activity during COVID times.

3. The indications for LT shall remain the same.

4. LT shall be performed only in SARS-CoV-2 NEGATIVE donor-recipient pairs.

5. SARS-CoV-2 PCR tests with rapid turnaround time must be available for expeditious processing of potential multiorgan deceased donors and preparation of the intended recipient.

6. Preoperative candidate and living donor evaluation may continue.

7. As per standard protocol, vaccination against pneumococcus and influenza is encouraged prior to LT.

8. All patient candidates and potential live donors must be evaluated for COVID.
   a. Initial assessment shall be based on travel history, exposure and symptoms. If they are not COVID suspects based on these, the pretransplant evaluation process may be carried out.
   b. SARS-CoV-2 PCR testing must be performed right before LT. The patient and potential donor shall be admitted 1-2 days prior to the procedure and the nasopharyngeal swab done. They shall remain in the hospital while waiting for the results. If both the recipient and live donor test NEGATIVE for SARS-CoV-2, the LT may proceed. If either test POSITIVE, the LT shall be deferred, and the retesting shall be undertaken in 14-28 days.
   c. If for whatever reason the contemplated LT does not proceed, a NEGATIVE swab test result shall be considered valid for 7 days, for as long as the patient remains confined in hospital or in strict isolation. If the operation is rescheduled beyond the 7-day validity, the provision in letter (b) shall apply.
   d. Should either the candidate or potential donor present with symptoms any time during the evaluation process prior to the LT, SARS-CoV-2 testing should be performed as deemed appropriate and the patient managed accordingly.

9. Routine SARS-CoV-2 testing of members of the LT team prior to participation in an operation is not required. However, those who get exposed or develop symptoms should have themselves tested prior to the operation. The PCR test result is valid for 7 days.

10. Since LT will be performed only in patients who test NEGATIVE for COVID, Level 3 PPE during the surgery is deemed sufficient. Donning Level 4 PPE is optional and shall be left to the discretion of the health care worker and/or the respective infection control committee of the institution.

11. Proper preparation of the Operating Suites should follow institutional infection control standards.

12. LT candidates who develop complications during the evaluation process or while waiting for suitable donors must be treated accordingly following set guidelines and precautions for the specific procedures, e.g. endoscopy for variceaI bleeding, paracentesis for massive ascites, dialysis for renal failure, liver support measures for liver failure. They must be admitted accordingly and COVID testing performed as per institutional guidelines.

13. Standard precautionary measures of wearing masks, face shields, frequent hand washing and physical distancing must be practiced at all times, especially

during face-to-face interactions between patients/donors and the health care workers.

14. Limit outpatient consults to only patients who must be seen in person.
    a. Consider alternative platforms such as telemedicine or phone consults, when appropriate.
    b. LT candidates or post-transplant patients requiring urgent attention (e.g. variceal bleeding, hepatic encephalopathy, signs of infection or acute rejection), shall be advised to seek immediate consult at the Emergency Room, where standard of care will be provided.

15. Standard immunosuppression protocols shall be followed since only SARS-CoV-2 NEGATIVE patients shall undergo LT. Immunosuppression shall be adjusted accordingly in posttransplant patients who contacted COVID.

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