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Position statement of the Belgian Transplantation Society (BTS) and the National Belgian Transplant Council (NTC) on organ procurement and organ transplantation during the COVID-19 epidemic in Belgium.

The COVID-19 pandemic is evolving with exponential increases in the number of infected patients in most European countries. This crisis has deleterious consequences for the transplant patients. They represent a high-risk population and transplant activities will be impacted twice, not only because of a shortage in capacity {(ICU) beds and personal}, but also an acute-on chronic severe shortage of organ donors.

The disease is causing life-threatening atypical pneumonia in a significant proportion of patients. Older patients and patients with significant co-morbidities such as diabetes, chronic kidney disease or severe cardio-pulmonary disease are at increased risk of severe COVID infection. Patients listed for organ transplantation often have multiple of these co-morbidities and represent a high-risk population before transplantation.

The impact of immunosuppressive therapy on the clinical course of COVID-19 infection is largely unknown but the emerging evidence is worrying. In the ten day period between March 13 and March 24, 2020 the number of infected transplant recipients reported in France has increased from 12 to 95. Of these about one third required hospitalization in intensive care. It is therefore likely that high dose immunosuppression will put patients at high risk of severe COVID-19 infection, particularly during the early post-transplant period. In addition, the availability of resources to test for COVID-19 infection and to prevent transmission are currently insufficient in Belgium. COVID testing is only done in severely symptomatic patients and adequate facemasks are currently available in insufficient numbers for patients and personnel in most hospitals. We recommend strict application of protective measures in transplant patients and in case of even mild clinical signs suggestive of COVID-19, a lower threshold for screening since they represent a higher risk population for infection and contagion.

Current evidence suggests that about half of infected individuals have no or only limited symptoms. The risk of having contact with undiagnosed carriers of the virus among staff and other patients during hospitalisation is relatively high. With all this, the benefit of transplantation as compared to the risk of severe COVID infection is therefore difficult to assess and likely to evolve to the detriment of transplantation in the course of a worsening epidemic. Another issue is the presence of eventually undiagnosed COVID-19 infection among organ donors. The potential risk of transmission of the COVID virus is difficult to assess but probably higher for recipients of lung transplants. However, during the SARS epidemic the virus could be detected in several solid organs in infected individuals. There is a broad consensus that COVID screening should be realized in all organ donors by nasopharyngeal nucleic acid testing (NAT) but some uncertainty remains due to inadequate sampling and false negative tests during the early incubation period. CT thorax has also been recommended as a screening tool for COVID-19 infection. Correct diagnosis of COVID-19 infection in the donor is important for both the transplant recipient as well as the procurement teams. Finally, organ procurement and transplantation activities are likely to be impacted by the availability of health care resources during the COVID epidemic. ICU beds are transformed into COVID zones and in many hospital ICUs are extended to operating theatres, restricting the available resources for procurement activities and transplantations. Medical staff are often reoriented to emergency and intensive care units and routine follow up consultations are cancelled. These restrictions in resources can impair procurement and transplantation activities at current quality and safety standards. In light of these considerations the Belgian Transplantation Society (BTS) and the National Transplant Council (NTC) have adopted the following position as to the continuation of deceased and living donor procurement and organ transplantation during the COVID-19 epidemic. We must take into account that the situation is fluid and rapidly evolving and that these recommendations will need to be regularly adjusted.

General statement on organ donation and transplantation during the COVID-19 epidemic

The BTS and NTC are worried about the consequences of this crisis for patients with life-threatening liver, heart, and lung failure (and kidney failure without possibility of dialysis). These patients have a high risk of mortality in the short term whereas their survival chance with a transplant is higher than 90% (often after an ICU stay of a few days), and a one year survival of about 85-90%. For this reason, the BTS and BTC recommend that access to donation/transplantation should be maintained wherever possible in the course of this epidemic to limit mortality in this patient population. Academic hospitals should continue to safeguard the necessary capacities in operation rooms and ICUs to further provide organ procurement and transplantation during the COVID-19 epidemic for the patients most in need.

Position statement on donation activity

Potential donors have to be screened by naso-pharyngeal NAT and CT thorax ahead of the planned donation procedure. Starting a procedure with a COVID-19 infected donor can potentially lead to exposure of the procurement team, contamination of the operating theatre. Procurement activity has to be planned depending on the locally available resources and ideally by identifying at least one recipient for the organs to be procured ahead of the procedure. Programs should avoid procurement procedures for which subsequently no recipient is found. Organs from other Eurotransplant member countries are acceptable for transplantation in Belgium in case donors were screened for COVID-19 by NAT on naso-pharyngeal swabs or broncho-alveolar lavage fluids. Belgian transplant centers will apply restrictions in travel for procurement and shipment of organs according to the policies decided by public authorities in the different ET member countries during the epidemic.

Position statement on transplantation activity

As a general guideline, transplantations that are not lifesaving in the short term should be delayed until the end of the COVID epidemic.

Renal transplantation

All living-donor kidney transplantations and deceased donor transplantations in patients that are stable on dialysis are put on hold until the end of the COVID-19 epidemic.

Centres can perform kidney transplantations in patients with Eurotransplant high urgency (HU) status. Renal transplantation in highly immunized patients with long waiting times can be envisioned in case a well-matched donor kidney against which the patient has no preformed donor-specific antibodies becomes available and the transplant centre considers that the risk-benefit ratio is beneficial and that the necessary resources for successful transplantation are available.

Children in dialysis are another patient category that benefit greatly from transplantation. Severe COVID-19 infections in children are rare and there are at present few hospitalizations and limited impact on the function of paediatric hospitals in Belgium. Dialysis therapy has a huge medical and social impact in children and renal transplantation in children can be a life-saving procedure. Paediatric renal transplantations can therefore be performed in case treating physicians consider the benefit outweighs the potential risks related to COVID-19 infection under high dose immunosuppression. The decision should be taken after discussion with the patient's caregivers and eventually the patient her- or himself.

Other organs

Kidney-pancreas transplantation is to be suspended except for high urgency transplants or in highly immunized patients according to the definition given above for renal transplantation.

Islet transplantation is suspended. An exception can eventually be made in patients who are already under maintenance immunosuppression for a previous islet transplant. Here the risk of the temporal increase in immunosuppression has to be balanced against the increased risk of infection.

At that stage, liver, heart, and lung transplantation programs continue. As a general guideline, priority should be given to hyper-urgent and urgent transplants. Transplantation centres decide on a case-by-case basis whether the clinical condition of patients can justify delaying transplantation until the end of the COVID epidemic. In this period of extreme shortage (capacity and donors), the BTS and the NTC recommend that the organ-specific committees of the BTS develop uniform criteria and guidelines.

COVID-19 testing in transplant recipients

All potential recipients have to be screened by naso-pharyngeal COVID-19 NAT ahead of the planned donation procedure. CT thorax to screen for typical COVID-associated lung lesions is also recommended at admission to the hospital for transplantation. Procurement and eventually transplantation have to be delayed until the results of COVID NAT in the recipient are known.

For the Belgian Transplantation Society and the National Belgian Transplant Council

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