Guidelines for transplantation during times of COVID infection

COVID-19 has been declared a "public health emergency of international concern" and a pandemic by WHO. Further, the disease has been given the name Coronavirus Disease 2019 (COVID-19) and is caused by the virus named SARS CoV-2. As of 16 March 2020, there are 266,073 confirmed cases globally with 11,184 deaths (https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/).

The disease has spread beyond the initial epicenter of Wuhan and has now involved almost every country. The patients present primarily with a respiratory illness, and pneumonia often seen among hospitalized patients. Mortality appears to be age dependent, with the highest rates among older adults (Age 50-59: 1.3%, 60-69: 3.6%, 70-79: 8%, 80+: 14.8%).

Although the effects of COVID among transplant recipients is yet to be made available, the effects on other populations like cancer suggests a higher chance of more severe disease (HR 3.56, 95% CI 1.65-7.69).

Lymphocytopenia appears to be an independent risk factor, and those with heart disease may be more vulnerable.

In this setting, nosocomial transmission of COVID also represents a significant risk.

Transplant related recommendations

Transplant in the times of COVID is considered risky in view of the problems of donor selection, recipient selection and infection control risks

1. Transplant can only be considered in centers which have dedicated facilities to ensure the safety of the recipient and the team
2. The pre, peri and post transplant areas, including the operation theaters need to be specifically ear marked for this purpose.
3. Staff involved in their care may not be involved in care of other patients.
4. There has to be adequate availability of PPE specifically ear marked for their care
5. The center needs to have protocols for patient movement around the hospital to prevent nosocomial acquisition of COVID
6. Transplant may be considered only after clear counseling on the risks involved due to COVID to recipient and donor.

Living donor transplant

Living donor transplant should be strongly discouraged for the following reasons.

1. The current focus is on control of the outbreak, and all resources should be allocated towards this.
2. It is impossible to rule out infection in the donor or recipient, as they could be in the incubation period, and this could endanger everyone, including members of the transplant team
3. There is no fool proof way to ensure testing at this point.

Emergent living donor transplants

This could be considered only in truly emergent conditions (like fulminant hepatic failure, for example) if

1. The situation is truly judged to be emergent, and other options would be associated with unacceptable risk of death
2. There is option of an in house donor

3. Both these patients have been quarantined for a period of preferably 14 days, and have not been in contact with a possibly infected patient
4. It would be preferable to have a negative PCR in both donor and recipient, if feasible.

Deceased donor transplants

This should be considered only for those patients who cannot be medically managed in the interim.

Lung and intestine recipients should be excluded if PCR is not possible.

Recipient criteria

1. The recipient should be symptom free for a period of 14 days- no respiratory symptoms (this may not apply to lung transplant)
2. They should have been in quarantine for a period of at least 14 days, away from other possible patients
3. Negative PCR would be preferable prior to surgery

Donor criteria

1. Donor, if in house, should not have any pulmonary symptoms
2. They should have been cared for away from patients with pulmonary symptoms
3. Donors from hospitals which do not have dedicated areas for care should be avoided in view of the risk of nosocomial transmission of COVID
4. Donor should be screened by CT scan and preferably by PCR, if possible

References.

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