IN the name of who

Life is from who (God)

covid -19 and the kidney transplantation

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Covid -19 patient :

All patients displayed respiratory symptoms and fever. Other common clinical features included hypoxia, chest crepitation, lymphopenia and high C-reactive protein. Very high D dimer, ferritin and troponin levels occurred in severe cases and likely prognostic.

MMF therapy significantly curtails the odds of a response to the vaccine and that the correlation is dosedependent. Modulation of the IS regimen may be necessary to increase the probability as well as the magnitude of response to vaccination, at least in a subset of patients. Interruption of MMF treatment improved the antibody response to vaccination

in the general population, the durability of the humoral response and the effectiveness of subsequent vaccination is strikingly superior in those with previous infection compared with uninfected persons.

The optimal immune response to a third dose of SARS-CoV-2 mRNA in post-transplant patients should provide the impetus for intensifying efforts to complete COVID-19 vaccination prior to transplant. Transplant centers need to combat vaccine hesitancy with education and ultimately vaccine mandates for waitlisted patients awaiting transplantation

The National Kidney Foundation urges patients with advanced kidney disease, including transplant and dialysis patients and patients requiring immunosuppression for treatment of advanced kidney disease, to continue masking and practicing social distancing, after being fully vaccinated.

- Do not socialize with anyone outside your household
- Wear a mask to protect yourself and others and stop the spread of COVID-19
- Stay at least 6 feet (about 2 arm lengths) from others who don't live with you, particularly in crowded areas
- Wash your hands with soap and water for 20 seconds or use hand sanitizer with at least 60% alcohol

And keep checking back – we are frequently updating our COVID-19 information, including vaccine updates.

What are the complications of COVID-19?

Complications may include pneumonia, acute respiratory distress syndrome (ARDS), multi-organ failure, septic shock, and death

it has been speculated that chronic immunosuppression may play a role as a protector against hyper-inflammatory response and cytokine storm severity in RTRs with COVID-19 [25]; thus the possibility of subsequent respiratory damage resulting from elevated cytokines would be mitigated. In view of this, it is assumed that infection with COVID-19 might not result in worse consequences in patients under immunosuppression agents chronically. Additionally, the protective role of chronic use of CNIs has been suggested in COVID-19 infected patients [26].

Fever, cough, dyspnea, and gastrointestinal symptoms were common on admission for COVID-19 in kidney transplant patients. Mortality was as high as 20% and increased to over 50% in patients in ICU and required invasive ventilation.

Vaccination can be offered to people who have had COVID-19 in the past. But given the limited vaccine supply, individuals may wish to defer their own COVID-19 vaccination for up to 6 months from the time of SARS-CoV-2 infection.

Vaccine effectiveness is expected to be similar in lactating women as in other adults. WHO recommends the use of the vaccine in lactating women as in other adults. WHO does not recommend discontinuing breastfeeding because of vaccination.

WHO does not recommend delaying pregnancy or terminating pregnancy because of vaccination.

A Phase 3 trial in children aged 12-15 years showed high efficacy and good safety in this age group, leading to an extension of the previous age indication from 16 years onwards down to age 12 onwards.

how long dose symptom appear after contact with covid 19 virus

On average it takes 5–6 days from when someone is infected with the virus for symptoms to

COVID-19 symptoms can sometimes persist for months. The virus can damage the lungs, heart and brain, which increases the risk of long-term health problems.

Organ damage caused by COVID-19

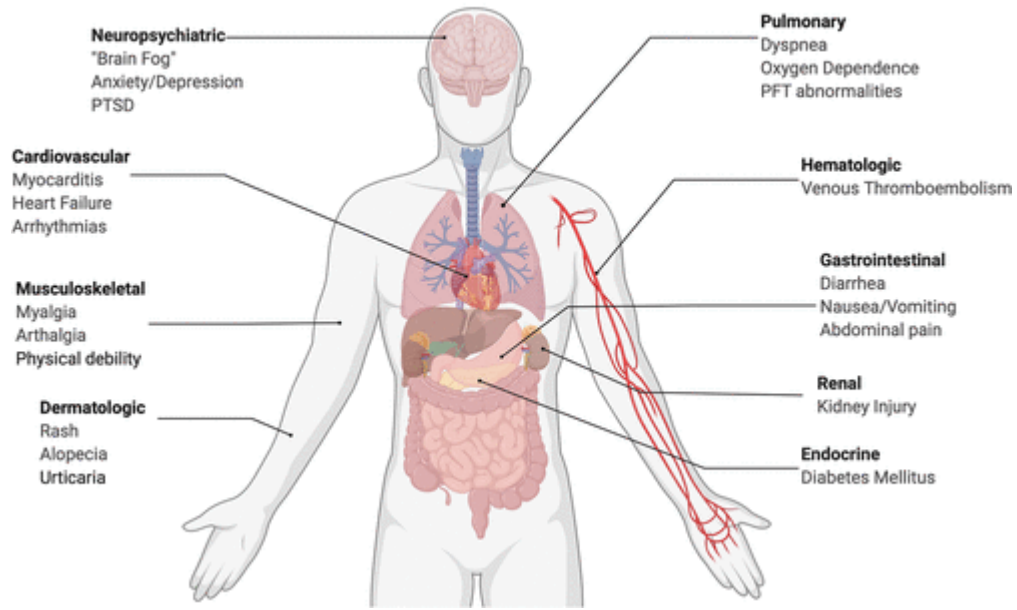
Although COVID-19 is seen as a disease that primarily affects the lungs, it can also damage many other organs, including the heart, kidneys and the brain. Organ damage may lead to health complications that linger after COVID-19 illness. In some people, lasting health effects may include long-term breathing problems, heart complications, chronic kidney impairment, stroke and Guillain-Barre syndrome — a condition that causes temporary paralysis.

Some adults and children experience multisystem inflammatory syndrome after they have had COVID-19. In this condition, some organs and tissues become severely inflamed.

Common signs and symptoms that linger over time include:

- Fatigue
- Shortness of breath or difficulty breathing
- Cough
- Joint pain
- Chest pain
- Memory, concentration or sleep problems
- Muscle pain or headache
- Fast or pounding heartbeat
- Loss of smell or taste
- Depression or anxiety
- Fever
- Dizziness when you stand
- Worsened symptoms after physical or mental activities

Long Term Complications of Covid-19



Possible pathophysiological mechanisms may include direct viral tissue damage; the entry receptor for SARS-CoV-2, angiotensin-converting enzyme 2 (ACE2), is expressed in a variety of locations in the body allowing the virus to enter target cells through activation of its spike protein by transmembrane serine protease 2 ([8](), [9]())

These receptors are expressed in epithelial cells, nasal goblet cells, gastrointestinal epithelial cells, pancreatic β cells, and renal podocytes suggesting that direct tissue damage may be a primary mechanism of the presentation of SARS-CoV-2 infection, which may also contribute to its longer-term complications (10–12).

Studies early on in the pandemic revealed that endothelial cells had high expression of ACE2 and that COVID-19 infection led to substantial alteration to the integrity of the vessel barrier and promotion of a procoagulative state (13).

Beyond direct cellular infection, several other mechanisms exist which may explain the pathophysiology leading to COVID-19 multiorgan systemic disorder. Other suggested pathways leading to long-term COVID-19 infection complications include endothelial injury, immune system dysregulation, and hypercoagulability often leading to thrombosis (5).

The most common presenting symptom was fever, which was reported in 51 of 66 (77%) patients, followed by cough, which was present in 38 (58%) patients. Depending on the severity of the initial presentation, patients were either hospitalized or managed as outpatients. Sixty of 66 (91%) patients needed hospitalization, whereas six (9%) patients were

Anosmia and ageusia were restricted to the less severe group.

Immunosuppression reduction was more frequently done in the invasive mechanical ventilation group (87%) than in the no invasive mechanical ventilation group (57%). The primary change in immunosuppression regimen in the majority of patients was the complete cessation of antimetabolites (mycophenolate mofetil, mycophenolic acid, or azathioprine [38 of 61; 62%]), especially in the invasive mechanical group (antimetabolites were stopped in all patients whose initial treatment included antimetabolites), while continuing tacrolimus (with a goal trough of 4–6 ng/ml) or cyclosporin (with a goal trough of 400–600 ng/ml) and the baseline prednisone in those individuals who were on maintenance prednisone. In two patients only, calcineurin inhibitors were interrupted. Si

time on dialysis before graft

So, our study reinforces the importance of ethnicity in COVID-19 disease, confirming United States data in a European population.

from deceased donors and that infection occurs more commonly closer to the date of transplantation, suggesting a role of the induction depleting agents used at the time of graft. Similarly, patients with steroid-based regimens presented an increased risk of COVID-19 disease. In our centers, steroidbased regimens are used for ABO-incompatible transplantation in patients with post-transplant HLA donor-specific antibodies “de novo” or in patients who experienced a rejection episode. We did not find significant differences between the other immunosuppressive strategies.

Although the highest mortality rates had been seen primarily in the elderly population, as more of the vulnerable population became vaccinated, the spread of the virus shifted toward an unvaccinated, younger demographic (4).

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Likewise, the loss of taste experienced has been postulated to be due to ACE2 expression diffusely on mucous membranes of the mouth, including the tongue (65). As the two senses are so intimately connected, it has also been suggested that the loss of smell contributes significantly to the loss of taste (65)

Any patient experiencing impaired smell and taste should be considered for olfactory training, which typically involves exposure to intense smells on a daily basis for 3 mo (

Patients experiencing hair-loss symptoms following COVID-19 infection can likely find symptoms to be reversible with administration of medications like minoxidil, finasteride, and topical corticosteroids (73).

Acute kidney injury (AKI) is common in acute COVID-19, and 5% of all hospitalized patients require inpatient renal replacement therapy (85). The etiology of AKI is multifactorial, with contributing factors including direct viral damage, systemic hypoxia, effects of inflammatory cytokines, and abnormal coagulation (86–89)

Acute kidney injury (AKI)

Acute tubular necrosis is the most common histopathological finding, but glomerulopathy and microvascular thrombi are seen as well (87–93). AKI is associated with increased hospital mortality, and those who survive hospital discharge may have residual renal dysfunction (85)

The number of our patients with very low CD3, CD4, and CD8 cell counts indirectly supports the need to decrease doses of immunosuppressive agents in patients with Covid-19, especially in those who have recently received antithymocyte globulin, which decreases all T-cell subsets for many weeks.

kidney-transplant recipients with Covid-19 — 28% at 3 weeks as compared with the reported 1% to 5% mortality among patients with Covid-19 in the general population who have undergone testing in the United States and the reported 8 to 15% mortality among patients with Covid-19 who are older than 70 years of age

After the second vaccine dose, 88.9% of patient on dialysis and only 17.8% of kidney transplant recipients developed antibodies against the virus that causes COVID-19. A specific T-cell response against the virus was evident in 100% of patients on dialysis and 57.8% of kidney transplant recipients.

The vaccine seems efficient in individuals undergoing dialysis, indicating that vaccination should be highly recommended in these patients," said Dr. Bertrand. "By contrast, the low antibody response observed in kidney transplant recipients is worrying; however, antibodies are not the full spectrum of protection induced by the vaccine. T cell immunity is probably also very important."

Antiproliferative agents (MMF and azathioprine) should be stopped at the time of admission to hospital, dose of prednisolone should be either unchanged or increased, and tacrolimus dose should be reduced.

lymphocyte-depleting antibodies increase the risk; therefore, many centers in the United Kingdom have stopped performing transplants requiring induction with either antithymocyte globulin or alemtuzumab. All patients in this series received basiliximab induction therapy at time of transplantations.

It is not advisable during this pandemic, especially for older recipients with comorbidities, in particular diabetes.

Cyclosporin A has been shown to have an inhibitory effect on proliferation of corona viruses and hepatitis C virus in vitro, while this is not the case for tacrolimus

It’s safe for immunocompromised people to get the Pfizer-BioNTech and Moderna vaccines, according to the Centers for Disease Control and Prevention, because neither vaccine contains live virus that could be dangerous to a person with a weakened immune system.

Thank you