Are kidney transplant patients at higher risk? The European experience

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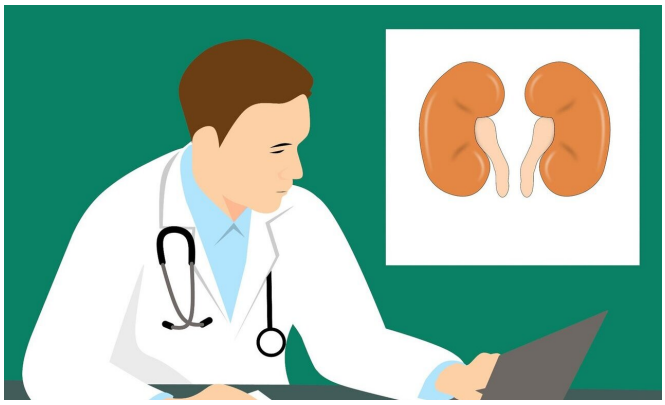

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Experience throughout the world, including in Europe, shows that advanced age is the most important risk factor for death in COVID-19: people aged over 70 years are over 10 times more likely to die compared to those aged below 50. Other factors increasing the risk of death include male sex and comorbidities, including obesity, hypertension, cardiovascular disease, diabetes, chronic lung disease and cancer.

Until now, data on COVID-19 in kidney transplant patients have been limited. In response to the pandemic, ERACODA was established as a European database to investigate COVID-19 outcomes in patients with kidney failure. ERACODA is now the largest international database with detailed follow-up, and unlike some other databases, contains data on kidney transplant as well as dialysis patients.

"There are several reasons why kidney transplant patients could be at higher risk. Not only do they often have known risk factors for severe COVID-19, but they also take daily immunosuppressive drugs that impair their immune response," said Professor Luuk Hilbrands. "At the same time, these patients know that they are vulnerable, and must protect themselves from infection and seek medical help for fever or other symptoms. Immunosuppressive drugs may also reduce the hyperinflammatory response in severe COVID-19, and some immunosuppressants (for example, cyclosporine) inhibit corona virus replication in the laboratory." Professor Hilbrands was speaking at the press conference held during the run-up to the ERA-EDTA Congress.

By June 1st, a total of 1073 patients with COVID-19 and complete 28-day follow-up had been entered on to the ERACODA database by 197 physicians from 98 centres in 26 countries, mainly in Europe. Of patients included on the database, 305 (28%) were kidney transplant recipients. By 28 days, 21% of these patients had died—a case fatality rate only slightly lower than the 25% case fatality rate seen in dialysis patients. In patients managed outside the hospital, mortality was low at 3% of kidney transplant patients compared to 5% of dialysis patients. Following admission to hospital, 24% of transplant patients died compared to 33% of dialysis patients. Of those treated in the intensive care unit (ICU), 45% of kidney transplant patients died compared with 53% of dialysis patients.

As in the general population, age over 75 years was the most important risk factor for death in kidney transplant patients, but male sex, diabetes and cardiovascular disease were not associated with mortality risk. There was also no evidence of benefit from treatment with antiviral drugs, or reduction or withdrawal of immunosuppressive therapy.

Professor Hilbrands commented: "With longer-term follow-up, we will be able to evaluate the consequences of COVID-19 for long-term kidney graft function. In the meantime, younger, relatively healthy kidney transplant patients do not seem to be at particular risk of death as long as they strictly follow social distancing and hygiene rules.

However, risk is individual, and I strongly advise all patients to talk to their physicians before making decisions about work, social life or travel."

This ERACODA database was established in March 2020 and is endorsed by the European Renal Association-European Dialysis and Transplantation Association (ERA-EDTA. Participating physicians submit data voluntarily on all consecutive adult (>18 years) kidney transplant and dialysis patients treated at their centre for COVID-19, either as outpatients or in hospital. A further expansion of the database with more patient data and longer follow-up will allow additional analyses to support clinical decision-making.

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