Nature Reviews Nephrology | Published online 15 May 2017; doi:10.1038/nrneph.2017.68

> direct anti-viral treatment … led to excellent allograft function with limited and transient liver inflammation

TRANSPLANTATION

Anti-viral therapy enables transplantation of HCV$^+$ kidneys

Kidneys for transplantation are in very short supply; yet, hundreds of kidneys from deceased patients with hepatitis C virus (HCV) infection are discarded every year. In a new open label, single group, pilot trial Peter Reese and David Goldberg show that direct anti-viral therapy cured recipients of HCV$^+$ kidneys of the infection and led to excellent allograft function with limited and transient liver inflammation.

The researchers tested the safety and efficacy of elbasvir and grazoprevir after transplantation of HCV genotype 1$^+$ kidneys into patients without HCV. As this therapy is only effective for HCV genotype 1, they genotyped donors concomitantly with organ recovery.

After exclusion of patients at high risk of liver disease, allograft failure or death, 10 HCV$^-$ recipients were transplanted with HCV$^+$ kidneys and received intravenous glucocorticoids, rabbit antithymocyte globulin, followed by oral tacrolimus, mycophenolate mofetil and prednisone in addition to the antiviral therapy. All patients received kidney transplants promptly (11–130 days after registering on the waiting list for HCV$^+$ kidneys) and were cured of HCV infection. Despite transiently elevated aminotransferase levels, which can indicate liver damage, in two patients, all recipients had good allograft function after 6 months (1.1 mg per dl serum creatinine and estimated glomerular filtration rate of 62.8 ml/min/1.73 m^2).

"The next step is larger, multicenter trials to confirm our findings and relax some of the inclusion criteria in our trial," say Reese and Goldberg, who are now working on transplanting HCV$^+$ hearts. "We are also engaging with insurance providers to support insurance payment for antiviral therapy after transplantation of HCV$^+$ organs."

Andrea Aguilar

ORIGINAL ARTICLE Goldberg, D. S. *et al.* Trial of transplantation of HCV-Infected kidneys into uninfected recipients. *N. Engl. J. Med.* http://dx.doi.org/10.1056/NEJMc1705221 (2017)