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Hepatitis C Virus Infection and Renal Transplantation

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The impact of HCV infection on the candidacy and post- transplant outcomes of the viremic patient with CKD stage 5 remains a challenging clinical issue. In a solid organ recipients, viral hepatitis has several critical issues, hepatitis virus transmission from donor to recipient, virus reactivation by immunosuppression or allogeneic stimulation, acceleration of underlying liver disease, extrahepatic manifestations of viral hepatitis such as glomerulonephritis, effects on cellular immune response, selection of antivirals, immunoprophylaxis methods, modulation in immunosuppresson. HCV can be transmitted from infected donors to recipients by renal transplantation. This may occur as a new infection or superinfection with a different genotype in an HCV infected recipient. It is suggested that transplantation of kidneys from donors infected with HCV be restricted to recipients with positive NAT. Compared to remaining on dialysis, renal transplantation confers a survival advantage to HCV infected patients. HCV infection should not be considered a contraindication for kidney transplantation. The prevalence of HCV infection among renal transplant recipients ranges from 7 to 40%. All renal transplant candidates should be evaluated for HCV infection. Although HCV infected patients fare better with a renal transplant than on maintenance dialysis, there is good evidence that HCV infected renal transplant recipients have worse patient and allograft survival after transplantation when compared to uninfected renal transplant recipients. HCV infected renal transplant candidates be considered for treatment with standard IFN before transplantation. Administration of nonpegylated IFN therapy to dialysis patients with HCV infection achieves SVR in about 40% of cases and SVR achieved before transplantation is sustained in 80- 90% of recipients after transplantation. If an early virological response is not obtained within 12 weeks of initiating IFN, the treatment can be discontinued. If an early virological response is obtained, IFN can be continued for 48 weeks in genotypes 1 & 4, for 24 weeks in genotypes 2 & 3. A 28- day wait is recommended after completing standard IFN therapy before proceeding with transplantation, based on avoiding exposure of the transplanted kidney to IFN. As it will not be known whether the patient has achieved SVR until 6 months after the completion of therapy, it is recommended that these patient only receive a kidney from an HCV- negative donor during this period of time. All conventional current maintenance immunosuppressive regimens can be considered for use in HCV- infected renal transplant recipients. HCV- infected renal transplant recipients are suggested to be screened for the development of hyperglycemia and proteinuria after transplantation.