

Survival Advantage of Kidney Transplantation Over Dialysis in Patients With Hepatitis C: A Systematic Review and Meta-Analysis

Atiporn Ingsathit, Nanticha Kamanamool, Ammarin Thakkinstian, and Vasant Sumethkul

Abstract

Background: The clinical outcomes of hepatitis C infection in kidney transplantation and maintenance dialysis patients remain controversial. Here, we conducted a systematic review and meta-analysis that aimed at comparing 5-year mortality rates between waiting list and kidney transplantation patients with hepatitis C infections.

Method: We searched Medline, EMBASE, and Scopus databases published since inception to June 2011 and found nine studies with 1734 patients who were eligible for pooling. Eligible studies were cohort studies that analyzed adult end-stage renal disease patients with hepatitis C virus infection and compared death rates between waiting list and kidney transplantation. The crude risk ratio of death along with its 95% confidence interval was estimated for each study. Data were independently extracted by two reviewers.

Results: The pooled risk ratio of death at 5 years by using a random-effect model was 2.19 (95% confidence interval, 1.50-3.20), which significantly favored the kidney transplantation when compared with the waiting list. There was evidence of heterogeneity of death rates across studies ($W^2=22.6$; $df=8$; $P=0.004$). From the meta-regression model, age and male gender could be the source of heterogeneity or variation of treatment effects. A major cause of death in the waiting list was cardiovascular diseases, whereas infection was a major cause in the transplant group. There was no evidence of publication bias suggested by an Egger test.

Conclusion: This systematic review suggested that hepatitis C virus Y infected patients who remain on dialysis are at higher risk of death when compared with those who received kidney transplantations.

Keywords: Hepatitis C infection, Systematic review, Kidney transplant, Waiting lists, Dialysis.

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