

Risk of Clostridioides Difficile Reinfection After Kidney Transplant. C. Thomas, (PharmD), B. Crowther, K. Schwarz, D. Chen, Y. Shandaliy, K. Johnson, and P. Klem, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of Colorado, Aurora, CO

The purpose of this study is to identify risk factors associated with the recurrence of Clostridioides difficile infection (CDI) 90 days after receiving kidney transplant.

A retrospective cohort study was conducted from 2011 to 2021 to compare the risk of CDI in kidney transplant recipients with a pre-transplant history of CDI to a control population without a history of CDI. The primary outcome was incidence of CDI 90 days post-transplant. The secondary outcome was incidence of CDI 365 days post-transplant. Subgroup analysis included proton-pump inhibitor use, mean post-transplant antibiotic duration, and mean length of index hospital stay. Inclusion criteria were age > 18 years, history of kidney transplant, and clinical diagnosis of CDI in the pre-transplant group.

148 total kidney transplant recipients within the University of Colorado Health system were included (46 pre-transplant, 102 control). The majority of subjects were male (53.4%), White or Caucasian (77.7%), and received a thymoglobulin induction dose of 4.5mg/kg (76.9%). Incidence of CDI 90 days post-transplant was 15.2% pre-transplant vs 2.9% control ($p = 0.01$, OR, 5.84 [95% confidence interval {CI}: 1.25 – 36.77]). Incidence of 365-day CDI was 28.3% pre-transplant vs 5.9% control ($p = 0.0004$). Nine (26.1%) subjects in the pre-transplant population experienced delayed graft function vs nine (8.8%) in the control group ($p = 0.01$).

Kidney transplant recipients with a history of CDI prior transplant have a significantly increased risk of CDI 90 days and 365 days after transplant.