

Baseline graft status is a critical predictor of kidney graft failure after diarrhoea.

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Abstract

BACKGROUND: Diarrhoea is one of the most frequent complications after kidney transplantation (KT). Non-infectious diarrhoea has been associated with reduced graft survival in kidney transplant recipients. However, the risk factors for renal allograft loss following diarrhoea remain largely unknown.

METHODS: Between January 2010 and August 2011, 195 consecutive KT recipients who underwent standardized microbiological workups for diarrhoea at a single centre were enrolled in this retrospective study.

RESULTS: An enteric pathogen was readily identified in 91 patients (47%), while extensive microbiological investigations failed to find any pathogen in the other 104. Norovirus was the leading cause of diarrhoea in these patients, accounting for 30% of the total diarrhoea episodes. The baseline characteristics were remarkably similar between non-infectious and infectious diarrhoea patients, with the exception that the non-infectious group had significantly lower graft function before diarrhoea ($P = 0.039$). Infectious diarrhoea was associated with a longer duration of symptoms ($P = 0.001$) and higher rates of acute kidney injury ($P = 0.029$) and hospitalization ($P < 0.001$) than non-

infectious diarrhoea. However, the non-infectious group had lower death-censored graft survival than the infectious group (Gehan-Wilcoxon test, $P = 0.038$). Multivariate analysis retained three independent predictors of graft failure after diarrhoea: diarrhoea occurring ≥ 5 years after KT [hazard ratio (HR) 4.82; $P < 0.001$], re-transplantation (HR 2.38; $P = 0.001$) and baseline estimated glomerular filtration rate < 30 mL/min/1.73 m² (HR 11.02; $P < 0.001$).

CONCLUSION: Our study shows that pre-existing conditions (re-transplantation, chronic graft dysfunction and late occurrence) determine the primary functional long-term consequences of post-transplant diarrhoea.

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KEYWORDS: diarrhoea; kidney transplantation; prognostic factors

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