

Episodes of Urinary Tract Infection in Post-renal Transplant Patients

Based on Count Regression Models

by

Xandro Alexi A. Nieto

A special problem

submitted in partial fulfillment
of the requirements for the degree

Master of Statistics

July 2016

Abstract

Renal transplant has been one of the best options in patients with end-stage renal disease. However, this option can lead to urinary tract infections, which can lead to hemorrhage, impaired graft function, graft failure and even death. Data were gathered from the renal transplant procedures performed in National Kidney and Transplant Institute (NKTII) from 2012 to 2014. Results showed that, using zero-inflated Poisson regression, male post renal transplant patients have incidence risk ratio of UTI lower by 0.52 [IRR = 0.48; 95% CI: 0.26 to 0.88], and patients who had chronic glomerulonephritis have lower UTI incidence risk ratio by 0.66 [IRR = 0.34; 95% CI: 0.22 to 0.52]. Furthermore, the odds ratio that hypertensive nephrosclerosis patients will not have UTI is 2.32 [OR = 1.04; 95% CI: 1.06 to 5.043].

Keywords: urinary tract infection, post-renal transplant, chronic glomerulonephritis, hypertensive nephrosclerosis, zero-inflated Poisson regression