Some observations of the impact of acute and chronic rejection on kidney and liver transplantation

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Helsinki: MarkStat Consultancy, 2017

ABSTRACT

Background Survival rates of kidney and liver transplantations have improved significantly over the last decades. Despite the progresses made especially in the 1-year graft survival and attrition rates, the developments in long-term graft survival post-transplant have not followed through.

Data and Objectives This paper reviews the published survival experiences of kidney and liver transplantation patients from the period 1982-2004 in Finland, reports some new observations derived from the re-analyses of the preceding datasets, and updates the discussion concerning the impact of acute rejections on the chronic deterioration of the grafts.

Results The half-life expectancies for renal and hepatic transplants were projected to last 15 years and 18 years, respectively. The graft survival probabilities for the liver transplant patients who had undergone an acute rejection episode were unexpectedly greater than those for their peers without such a complication. In comparison, the graft survival probabilities for the kidney transplant patients with an acute rejection were consistently smaller than for their counterparts without it.
Concluding Remarks It is tentatively hypothesized that: a successfully treated acute rejection in the liver graft may prolong its long-term survival; and, with the advent of modern treatments for the chronic kidney graft rejection, histological changes and decline in the renal transplant function are expected to reduce.

Keywords Graft survival; Kidney; Liver; Life expectancy; Modeling; Rejection; Transplantation

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