Data from many different countries show that the first few months after the start of dialysis are a high-risk period for mortality, reports a study in *Kidney International*. The researchers analyzed data on nearly 87,000 patients from 11 countries, submitted to the Dialysis Outcomes and Practice Patterns Study (DOPPS). All-cause mortality in the early period within 120 days after the start of dialysis was compared with the intermediate period (121 through 365 days) and late period (after 365 days). Analyses were adjusted for age, sex, race, and presence of diabetes.

The rate of death per 100 patient-years was 26.7 during the early period after the start of dialysis, decreasing to 16.9 in the intermediate period and 13.7 in the late period. All 11 countries had higher mortality in the early period than in the intermediate period. Adjusted hazard ratios (HRs) for the early period versus the intermediate period varied considerably: 3.1 in Japan; 1.6 to 1.8 in Australia/New Zealand, Belgium, and Italy; 1.3 to 1.5 in Canada, France, Germany, Sweden, and the United States; and 1.2 in the United Kingdom. For the late period versus the intermediate period, the HRs were closer to 1.

The risk of death during the early period was higher for older patients than for younger patients (HR 1.59 versus 1.08), for female patients than for male patients (HR 1.62 versus 1.46), and for patients without diabetes as the primary cause of ESRD (HR 1.62 versus 1.39). During all periods, most countries had lower mortality than did the United States. Previous studies have reported increased mortality early after the beginning of dialysis. This study suggests a higher risk of death during the first 120 days in patients receiving dialysis in all countries participating in the DOPPS. Early mortality differs between countries; the United States is on the higher end of the range. The investigators conclude, “Efforts to improve outcomes should focus on the transition period and the first few months of dialysis” [Robinson BM, et al. *Worldwide, mortality risk is high soon after initiation of hemodialysis.* Kidney Int 2014; 85:158–165].

**Worldwide Increase in Mortality Soon After Start of Dialysis**

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for immunosuppression they received a calcineurin inhibitor and mycophenolate mofetil. The only indications for steroids were rejection or comorbid conditions.

Sixty percent of patients were male; the mean age at transplantation was 9.5 years. Mortality was 7 percent. Graft survival was 81 percent after 5 years and 63 percent after 10 years. There was a 9 percent rate of acute rejection within the first year after transplantation. Twenty-nine percent of children received steroids at some point during follow-up, most commonly for acute clinical rejection.

The children had a normal distribution of body mass index (BMI) before transplantation. Their mean pretransplantation BMI standard deviation score (SDS) of 0.21 remained stable over the subsequent 5 years. Growth improved significantly after transplantation; the mean height SDS increased from −1.7 to −1.1. Children younger than 6 years had the greatest catch-up growth; their height SDS increased from −2.1 to −0.9.

Alternative strategies have been developed to avoid the side effects of steroids in children undergoing organ transplantation. Steroid-free immunosuppression has shown good results in terms of graft function and rejection rates in children receiving kidney transplants. This long-term follow-up shows that steroid-free transplantation not only is medically safe but also improves growth while controlling the development of obesity. Catch-up growth is particularly favorable in the youngest transplant recipients [Wittenhagen P, et al. Long-term experience of steroid-free pediatric renal transplantation: effects on graft function, body mass index, and longitudinal growth. Pediatr Transplant 2014; 18:35–41].

Treatments to Prevent ESRD Are Less Effective in the “Real World”

In a real-world population of older adults at risk, interventions to prevent ESRD have a smaller effect size than reported in clinical trials, reports a study in JAMA Internal Medicine.

The simulation study used a retrospective cohort of more than 370,000 Department of Veterans Affairs (VA) patients with chronic kidney disease. Data from four major trials of angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers (ACEIs/ARBs) for prevention of ESRD were applied to this real-world, high-risk population. In the trials, with follow-up times of 2.6 to 3.4 years, patients taking ACEIs/ARBs had relative risk reductions of 23 to 56 percent for ESRD.

The reported numbers needed to treat (NNT) ranged from nine to 25. The researchers analyzed the expected impact of a 30 percent relative risk reduction on the NNT to prevent one case of ESRD over 3 years.

In the real-world VA population, the estimated NNT values varied widely according to the patients’ baseline ESRD risk. For patients at highest risk (estimated GFR [eGFR] 15 to 29 mL/min per 1.73 m² and dipstick proteinuria 2+ or greater), NNT was 16. In contrast, for those at lowest risk (eGFR 45 to 59 mL per min/1.73 m² and negative or trace proteinuria, or eGFR 60 mL/min per 1.73 m² or higher with 1+ proteinuria), the NNT to prevent one case of ESRD rose to 2500. More than 90 percent of patients in the VA cohort fell into a group with an NNT of 100 or higher. The results were similar on sensitivity analysis and with up to 10 years of ACEI/ARB treatment. This was so in all sensitivity analyses.