

'Statins' linked to improved survival in kidney transplant recipients

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For patients receiving kidney transplants, treatment with cholesterol-lowering "statin" drugs may lead to longer survival, reports a study in the November 2008 *Journal of the American Society of Nephrology* (JASN).

"Statin therapy is well established for the primary and secondary prevention of cardiovascular disease in the general population, but its effectiveness in patients with kidney disease is unclear," comments Dr. Rainer Oberbauer of the Medical University of Vienna, one of the study authors. "We showed that statin therapy was indeed associated with a lower risk of death in renal transplant recipients."

The study included data on 2,041 patients receiving their first kidney transplant between 1990 and 2003. At the time of transplantation, about 15 percent of the patients were taking statin drugs to reduce their cholesterol levels. Patient survival and survival of the transplanted kidney were compared for patients who were and were not taking statins.

Overall, survival was somewhat better for patients on statin treatment. At 12 years' follow-up, 73 percent of statin-treated patients were alive, compared to 64 percent of patients not taking statins.

An important part of the study was the use of sophisticated statistical analyses to adjust for potentially confounding variables—including the fact that patients taking statins had more cardiovascular risk factors and pre-existing cardiovascular disease. The results showed a significantly lower risk of death in patients taking statins—36 percent lower than in

nonusers.

Statin treatment had no effect on survival of the transplanted kidney (graft survival). In both groups, about 70 percent of the transplanted kidneys were functioning after 12 years.

Kidney disease is a major risk factor for cardiovascular disease. Sixty percent of patients with kidney transplants die of cardiovascular disease, compared to 40 percent of the general population.

However, for several reasons, it has been unclear whether cholesterol-lowering statin treatment reduces cardiovascular risks in patients with kidney disease, according to Dr. Oberbauer. In a "risk factor paradox," higher cholesterol levels may be linked to improved survival for patients with end-stage renal disease (loss of kidney function requiring dialysis or transplantation). Studies of statin treatment in dialysis and kidney transplant patients have yielded conflicting results. Most other trials of statins have excluded patients with kidney disease.

"We now show that statin use in renal transplant recipients is associated with longer survival," says Dr. Oberbauer. However, he emphasizes that the observational study does not permit any cause-and-effect conclusions: "The proof that statin use prolongs life can only be accomplished in a randomized controlled trial."

Source: American Society of Nephrology

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