

# Decade-long trial confirms benefits of steroid withdrawal for transplant patients

August 23 2010

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A University of Cincinnati (UC) analysis of 10 years of data from local kidney transplant patients shows that patients removed from a corticosteroid regimen shortly after surgery have better graft survival rates, better survival rates and fewer cardiovascular events than patients kept on the traditional regimen of long-term steroids.

The analysis shows that, out of 904 patients transplanted at UC Health University Hospital and Christ Hospital, early corticosteroids withdrawal (ECSWD) patients had an 83.8 percent graft survival rate and a 91.7 percent patient survival rate, as compared to 68.6 percent graft survival and 83.6 percent patient survival for chronic corticosteroid (CCS) patients. UC's survival rates were numerically higher than national rates from the United Network for Organ Sharing (UNOS) registry.

Corticosteroids, in combination with other [immunosuppressive drugs](#), have historically been prescribed to [transplant patients](#) to help suppress the body's immune response and allow the transplanted organ to function after surgery. But they also come with an increased risk of [high blood pressure](#), high [cholesterol](#), weight gain, diabetes and cardiovascular disease and events.

With development of better immunosuppressive drugs, that cardiovascular risk has come to be the chief concern for transplant patients' survival, not the loss of their new organ, explains Adele Rike Shields, PharmD, UC research assistant professor of surgery and clinical transplant pharmacist at Christ Hospital.

Four years ago, Shields says, UC researchers showed ECSWD patients had a significant reduction in cardiovascular events as opposed to CCS patients. But researchers still weren't certain whether ECSWD patients have worse long-term graft functioning due to a risk of acute rejection of the organ.

With 10 years of data, Shields says they can now answer that question definitively.

"This is the first study with enough long-term follow-up to show that we're not causing an increase in graft loss with early corticosteroid withdrawal," says Shields. "We have just as good, if not better graft results and the patients' survival is better because of their reduced [cardiovascular risk](#)."

She presented the work last week at the International Congress of The Transplantation Society in Vancouver.

Not only does the analysis show that ECSWD patients have decreased cardiovascular events, Shields says they also have a reduced risk of malignancies not associated with immunosuppressive drugs. ECSWD patients showed a 2.2 percent rate of non-PTLD cancer, one-third the rate of malignancies in CCS patients. PTLN, or post-transplant lymphoproliferative disorder, is the name given to a group of lymphomas occurring in immunosuppressed patients.

UC transplant researchers have focused on steroid withdrawal under E. Steve Woodle, MD, chief of the division of transplant surgery. Woodle calls the data from the 10-year analysis "highly statistically significant."

"To my knowledge, we are the first of any transplant program to demonstrate this magnitude of an effect," he says. "We now know without a doubt that our original hypothesis generated more than 15

years ago does indeed benefit our patients. This is the final nail in the coffin for steroid based immunosuppression for our program."

Provided by University of Cincinnati

Citation: Decade-long trial confirms benefits of steroid withdrawal for transplant patients (2010, August 23) retrieved 30 June 2024 from <https://medicalxpress.com/news/2010-08-decade-long-trial-benefits-steroid-transplant.html>

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