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Post-Transplant Patients Off Steroids Have Fewer Cardiovascular Events, Study Finds

Post-transplant patients who have been removed from a corticosteroid regimen have fewer cardiovascular events than those patients on steroids, increasing their graft survival rates and reducing early mortality, according to study results being presented by University of Cincinnati (UC) transplantation researchers.

Researchers with the division of transplantation and department of internal medicine are presenting the work at the American Transplant Congress (ATC), the annual meeting of the American Society of Transplantation, held May 1-5 in San Diego.

Corticosteroids are commonly given to post-transplant patients as part of an immunosuppressive regime to promote graft survival. But the steroids also cause harmful cardiovascular side effects such as increased blood pressure, cholesterol and weight gain, says Rita Alloway, PharmD, UC Research Professor of Internal Medicine. UC's transplant clinical research team has largely focused on reducing patient exposure to corticosteroids during post-transplantation treatment.

"Ten years ago, almost 80 percent of post-transplant kidney patients were discharged from the hospital on steroids," she says. "Now, according to United Network for Organ Sharing (UNOS) reports, less than 20 percent are discharged from the hospital on steroids. We've effectively removed chronic steroids from the immunosuppressive regimen while maintaining similar graft survival outcomes."

In work led by UC research assistant professor of surgery Adele Rike Shields, PharmD, researchers are now able to show patients removed from a steroid treatment have decreased cardiovascular events after transplant, in addition to their lowered side effects.

Shields evaluated acute graft rejection and graft loss in 630 kidney transplant patients withdrawn from corticosteroids. She found the risk factors in the corticosteroid-withdrawn kidney transplant population are similar to those traditionally defined under conventional immunosuppression with steroids.

"With the summation of 10 years of work, we've been able to show that patients off corticosteroids have the same graft-function outcomes as patients on corticosteroids," says Alloway. "In addition, the patients off corticosteroids benefit from fewer cardiovascular events."

UC researchers are also presenting the results of continued studies on use of the cancer drug bortezomib in solid organ transplant recipients. Altogether, 10 abstracts on UC-led bortezomib work will be featured at the meeting.

In a study published in the December 2008 issue of Transplantation, UC director of transplantation E. Steve Woodle, MD, and his colleagues showed bortezomib, a cancer drug commonly used to treat cancer of the plasma cells, is effective in treating rejection episodes caused by antibodies that attack transplanted kidneys.

Now, says Alloway, UC is presenting data from the next logical series of studies on the drug's use in transplantation, including its effect on both late and early acute rejection and the desensitization of patients with high antibody levels pre-transplant.

In work presented by transplant pharmacy fellow Carlin Walsh, PharmD, investigators demonstrated the ability of bortezomib to significantly reduce the level of donor-specific antibodies when prior therapies have failed. Walsh received a Young Investigator Award from the American Society of Transplantation for the desensitization studies with bortezomib.

UC researchers are also reporting results of shared protocols on the bortezomib treatment for antibody-mediated rejection. After presenting their bortezomib findings at the 2009 ATC, UC researchers created the START collaborative to share standard of care treatment protocols for bortezomib therapies. Through the collaborative, transplant centers worldwide have requested this information to treat individual patients with a variety of solid organ transplant types.

"The information shared from this partnership represents an international collaborative experience of treating this unmet need in transplantation that inevitably results in graft loss," says Alloway. "Because transplant centers may have one to five antibody-mediated cases a year, it's difficult to assess a potential new treatment. But when you are able to share every center's cases together in one report, it's easier to identify trends that support definitive design of future controlled trials."

Source: Adapted from materials provided by University of Cincinnati Academic Health Center