

# News

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\*\*\*\*\*Technique for monitoring  
kidney transplants brought to U.S.  
by health science center doctors.

DALLAS--The first year after kidney transplantation is the most critical time for the organ's survival. If the kidney can survive that first year, it can often last a lifetime. But repeated episodes of rejection plague some transplant patients the first year after surgery.

Transplanters search for ways to prolong kidney survival, including methods for early detection of rejection processes before they irreparably damage the organ.

Doctors at The University of Texas Health Science Center at Dallas are looking to researchers in Finland for a technique of monitoring transplanted kidneys. A team led by Dr. Juha Kokko, chief of Nephrology at UTHSCD and president of the American Society of Nephrology, recently returned from Helsinki where they learned the monitoring technique used in Finland and elsewhere in Europe.

The technique, developed by Dr. Pekka Hayry of the University of Helsinki, involves using a fine needle to withdraw a small amount of circulating fluid within the kidney. The sample, taken daily, is then examined for cells that signal rejection and for other unique cells that may suggest toxicity from the drug cyclosporine, used to prevent rejection.

"The monitoring method appears both safe and effective in detecting early signs of rejection and nephrotoxicity, often even before clinical symptoms occur," says Dr. Juha Kokko, professor of Internal Medicine at the health science center. Kokko, originally from Finland, became familiar with Hayry's work when he was in Finland in 1984 to receive a Distinguished University Decoration from the University of Helsinki.

Since the late 1970s, according to Kokko, Hayry and his research team documented an 80 to 85 percent organ survival rate for kidney transplants without using the anti-rejection drug cyclosporine. Comparatively, doctors in this country had only a 55 to 60 percent organ survival rate without the use of cyclosporine.

The UTHSCD team plans to continue investigating the monitoring method while comparing their results with those of Hayry and his associates. At this time, the health science center doctors have used the monitoring technique on 26 patients and, based on their findings, have altered treatment of five patients.

Participating in the project with Kokko are UTHSCD doctors Dr. Harold Helderman, associate professor of Internal Medicine and medical director of the kidney transplant program at Parkland Memorial Hospital, and assistant professor of Pathology Dr. Jose Hernandez.

"This test appears valuable because usually we don't find out rejection is occurring until 48 hours after the tissue rejection process begins. With this method we may be able to successfully alter therapy before rejection becomes clinically evident," Kokko says.

(more)

add one--kidney monitoring

Transplanted kidneys are lost for a variety of reasons, says Helderman. Among them are immunological attacks, lack of blood flow to the organ and toxicity from drugs. Advanced clinical signs of rejection include fever, tenderness in the transplant area, and, as a sign of kidney dysfunction, serum creatinine levels begin to rise.

Helderman described the benefits of the monitoring technique applied to one kidney transplant patient whose kidney was not producing urine five weeks after surgery. "We thought the kidney was silently rejected. Ordinarily, at five weeks we would see a functioning kidney," he said. But the monitoring technique showed the kidney was not being rejected. The doctors waited and in another week the kidney started functioning properly.

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