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Improving the Outlook for Simultaneous Pancreas-Kidney Transplants

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The body's rejection of transplanted organs and tissues is an unfortunate risk of transplant surgery. Historically, rejection rates in a simultaneous pancreas-kidney (SPK) transplant have been as high as 80% and, in 2001, averaged nearly 20% [1]. What's more, steroid-based immunosuppressive drugs that have been traditionally used to combat rejection are associated with several serious side-effects, including increased risks of osteoporosis and bone and joint problems.

Diabetes Center surgeons Drs. Peter Stock and Chris Freise have been pioneering new methods of immunosuppression for SPK transplants that do not rely upon steroids, with great success.

In a retrospective case review of 40 patients who received a simultaneous pancreas-kidney transplant followed by a steroid-avoiding immunosuppression protocol, the UCSF team reported 95% patient survival 1 year following transplant. Importantly, 87.5% of patients had retained insulin independence for 1 full year after transplantation, indicating their transplanted pancreas was continuing to function, while 92.5% had retained functioning kidney transplants at 1 year.

The study also looked at side effects of this immunosuppression regimen, and found no increased risk of infections or surgical complications. One potential concern with steroid use is abnormal cholesterol levels, and patients on the steroid free regimen required cholesterol lowering drugs only 18% of the time. The use of blood pressure medicines was needed about 50% of the time. Other potential benefits of avoiding steroids include less bone disease, less weight gain, and hopefully fewer cardiovascular problems. These other side effects are being studied by the investigators.

Over the past 15 years, the UCSF Transplant Division has performed nearly 350 pancreas transplants. Most of these have been performed as a simultaneous pancreas and kidney transplant in type 1 diabetic patients who have progressed to end stage kidney failure. Pancreas-kidney transplantation can be a very effective, highly successful treatment for patients with diabetes who are experiencing severe complications including renal failure, severe hypoglycemic unawareness, and debilitating neuropathy. Pancreas-only transplants are now being offered for patients who do not require a kidney transplant, but who have very

unpredictable and erratic blood sugar control despite intensive insulin therapy. Success rates for solitary pancreas transplants (as defined by insulin independence) are approximately 90% at 1 year post-transplant.

For more information on the UCSF Kidney and Pancreas Transplantation Program, contact: (415) 353-1551.

1. From USTransplant.org: Scientific Registry of Transplant Recipients. Link: http://www.ustransplant.org/cgi-bin/ar?p=chapter_iv_ar_cd.htm&y=2003 [1]

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