

# Pregnancy Outcomes in Pancreas-Kidney vs. Kidney-Along Diabetic Female Transplant Recipients

Lyuba Gitman, Faith Carlin, Lisa A. Coscia, Carolyn H. McGrory, Dawn Armenti, Vincent T. Armenti

Department of Surgery, Thomas Jefferson University, Philadelphia, PA

## Abstract

The purpose of this study was to compare pregnancy outcomes in female kidney alone (K) recipients with insulin-dependent diabetes to pancreas-kidney recipients (PK) reporting to the National Transplantation Pregnancy Registry. Data were collected via questionnaires, phone interviews and hospital records. There were 43 PK and 34 K recipients analyzed. Hypertension was reported in 64.9% PK and 68.1% K pregnancies and preeclampsia in 32.7% PK and 30.3% K. Statistical differences were seen in maternal infections (PK 45.8%, K 25%;  $p=0.031$ ) and graft (transplant) loss within two years after pregnancy (PK 23.3%, K 2.9%;  $p=0.019$ ). In conclusion, the high incidences of hypertension, preeclampsia and infection during pregnancy underscore the high-risk nature of pregnancy in both PK and K recipients. Although overall offspring outcomes are similar in both PK and K groups, pregnancy in PK recipients may be associated with higher incidences of maternal infections and overall graft loss.

## Purpose

The purpose of this study was to compare effects of post-transplant pregnancy on the graft, recipient, and offspring between 77 insulin-dependent female recipients who received either pancreas-kidney (43) or kidney-alone allografts (34).

## Methods

Data were collected by the NTPR via questionnaires, phone interviews and hospital records.

Analyses were done by Chi square or Fisher's exact test for discrete variables, and 2-tailed t-test for continuous variables.

## Pregnancy Outcomes

	PK	K	P Value
Recipients	43	34	
Pregnancy	76	47	
Outcomes	78*	47	
Livebirths	70.5%	66%	NS
Spontaneous Abortions	23.1%	21.3%	NS
Therapeutic abortions	3.9%	6.4%	NS
Stillbirth	0	4.3%	NS
Ectopic	2.6%	2.1%	NS

\*Includes twins

## Maternal Comorbid Conditions During Pregnancy

	PK	K	P Value
Hypertension	64.9%	68.1%	NS
Preeclampsia	32.7%	30.3%	NS
Infections	45.8%	25%	0.031
Serum Creatinine (mg/dL)	1.5 ± 0.7	1.5 ± 1.1	NS
Rejection	5.5%	0	NS

## Maternal Factors

	PK	K	P Value
Age at the time of transplant (y)	29 ± 3.7	29.3 ± 3.7	NS
Transplant-to-conception interval (y)	4.1 ± 2.8	2.9 ± 2.2	0.007
Serum creatinine after pregnancy (mg/dL)	1.6 ± 0.9	1.4 ± 0.6	NS
Graft loss w/in 2 yrs after pregnancy*	23.3%	2.9%	0.019

\*\* 10 PK patients lost allografts: 4 K, 4 P, 2 both P and K

## Newborn Outcomes

	PK (n=55)	K (n=31)	P Value
Gestational Age (wks)	34.2 ± 3.2	33.6 ± 3.5	NS
Premature (<37 wks)	76.4 %	77.4 %	NS
Birthweight (g)	2112 ± 726	2358 ± 945	NS
Low birthweight (<2500 g)	61.8 %	51.6 %	NS
Very low birthweight (<1500 g)	21.8 %	22.6 %	NS
Cesarean Section	62.3 %	74.2%	NS

## Conclusions

- The high incidences of hypertension, preeclampsia, and infection during pregnancy underscore the high-risk nature of pregnancy in both pancreas-kidney and kidney alone recipients.
- Although overall offspring outcomes are similar in both PK and K groups, pregnancy in PK recipients may be associated with higher incidences of maternal infections and overall graft loss.
- Centers are encouraged to report all pregnancies in transplant recipients to the NTPR.

To contact the NTPR and report additional pregnancies:

Thomas Jefferson University  
1025 Walnut Street, 605 College Building,  
Philadelphia, PA 19107, USA  
Phone: Toll-free 877-955-6877; 215-955-4820;  
fax 215-923-1420  
Email: [NTPR.Registry@jefferson.edu](mailto:NTPR.Registry@jefferson.edu)  
Website: <http://www.jefferson.edu/ntp>

The NTPR is supported by grants from:

Novartis Pharmaceuticals, Corp.  
Astellas Pharma US, Inc.  
Roche Laboratories Inc.  
Wyeth Pharmaceuticals