

# OUTCOME OF KIDNEY TRANSPLANTATION in PEDIATRIC PATIENTS AFTER TRANSFER TO ADULT CARE UNIT: A SINGLE CENTER STUDY

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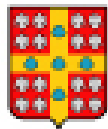


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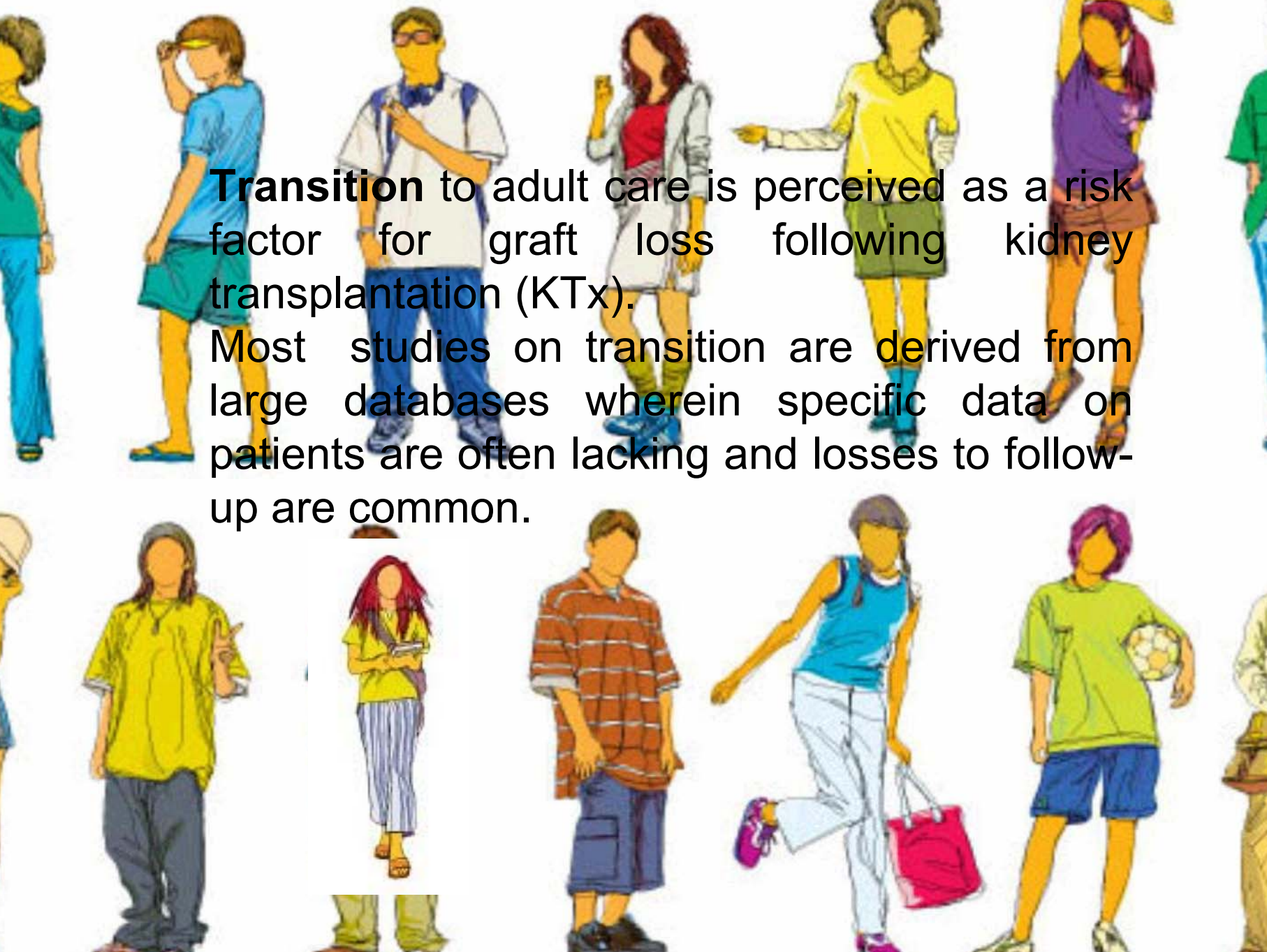
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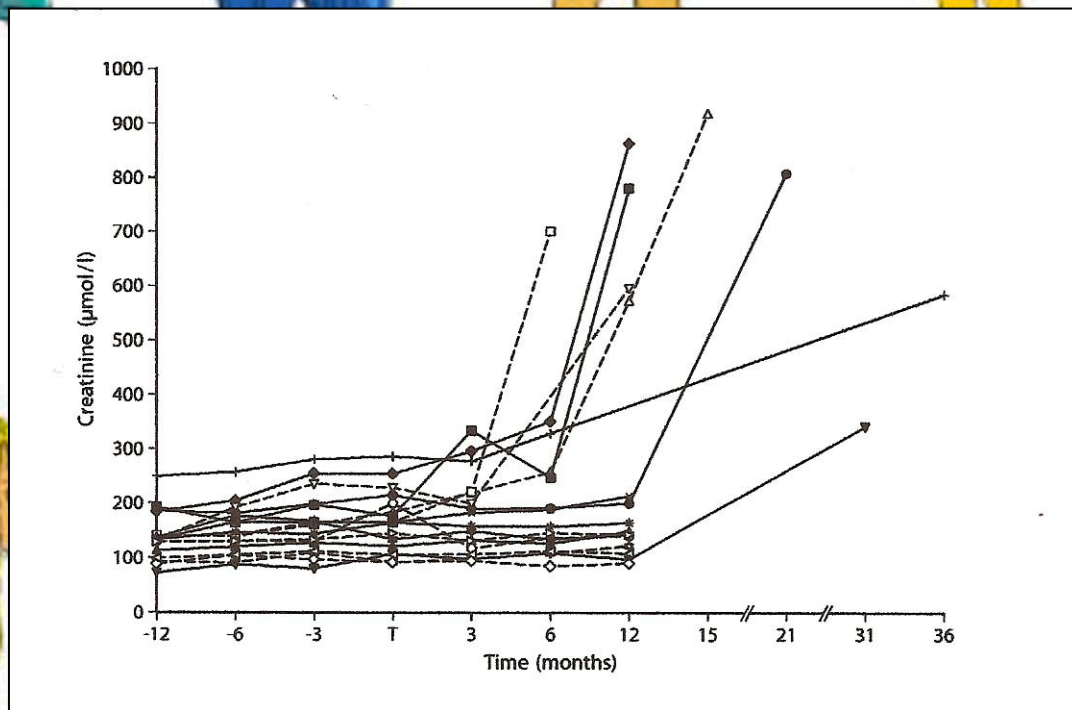


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The background of the slide features a collage of colorful, stylized illustrations of young people in various poses and outfits, representing a diverse group of individuals. The text is overlaid on this background.

**Transition** to adult care is perceived as a risk factor for graft loss following kidney transplantation (KTx). Most studies on transition are derived from large databases wherein specific data on patients are often lacking and losses to follow-up are common.

# Non-compliance and transfer from paediatric to adult transplant unit.



Non-compliance and transfer from paediatric to adult transplant unit. A R Watson. Peds nephrol 2000



# Objectives of the study

- To assess in a cohort of patients transferred within the same province percentage of unexpected graft loss post transfer (TF)
- Identify pre-transfer risk factors for eventual graft loss

# Methods

Retrospective study of 69 youngsters transplanted at CHU Ste-Justine from 1978 to 2003 and transferred to adult care since 1990.

Patients were transferred to 5 different adult centers within the same province at a mean age of 18.9 years (16-22)

# Methods

## Patients population:

38 boys and 31 girls . Single kidney transplantation  
mean age at KTx:  $12.6 \pm 4.1$  years old.

95.7% received a cadaveric kidney donor

Pre-emptive Kidney Tx performed in 8 patients (11.6%).

64 first grafts, 4 second grafts and one third graft

## Major diagnosis:

Uropathies (56.5%)

Glomerulonephritis (23.2%)

Cystinosis (10.1%)



Unexpected graft loss was defined as:

- stable graft function at transfer time and graft survival < 10 years
- graft loss due to documented non compliance.

Adolescence was defined as above 13 years of age.



# Results

**After transfer 26 patients lost their graft (37.7%);  
14 boys and 12 girls**

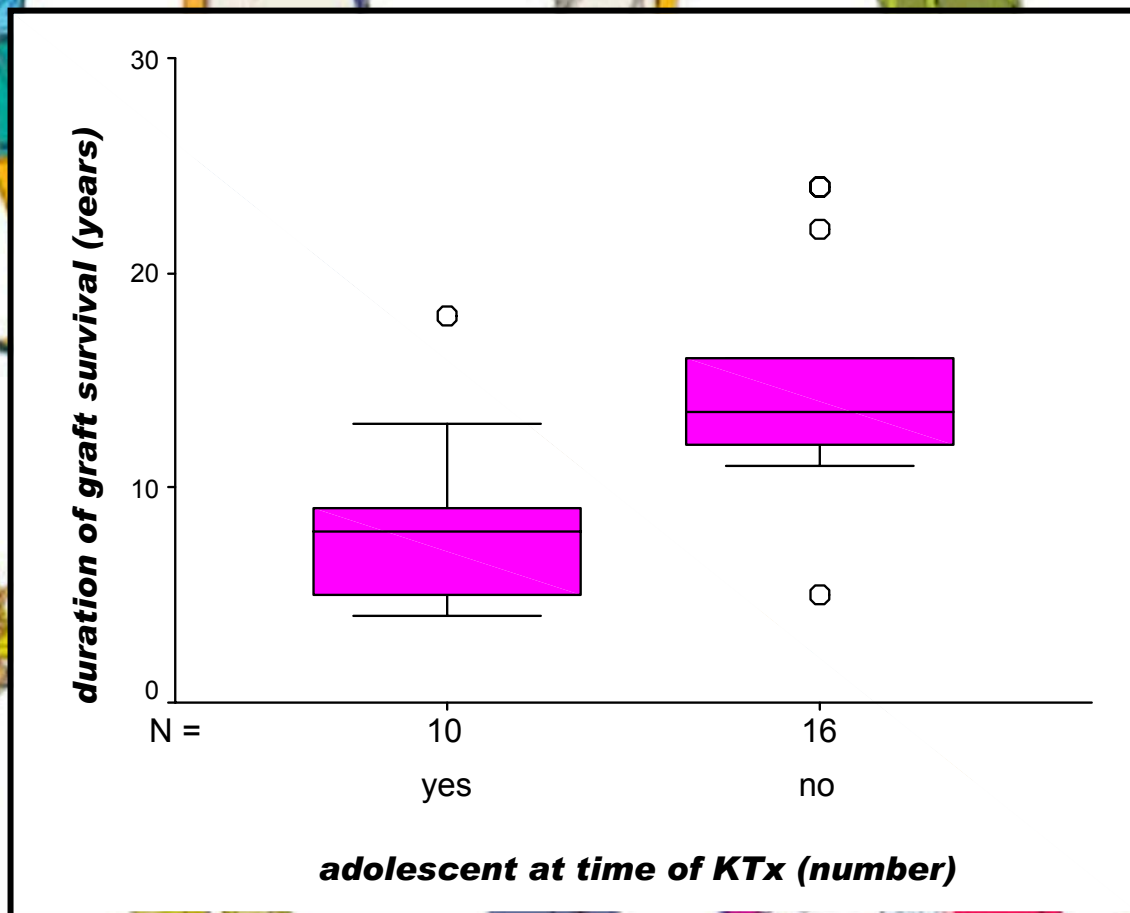
**Mean *time post transfer* of 4.3 years  $\pm$  3.9 years  
(ranges: 2 months to 14 years).**

**Mean *graft survival* 12.4 years  $\pm$  5.6 years compared to  
16.8 years  $\pm$  4.9 years for the remainder of the cohort.**

**Duration of graft function was shorter if transplanted as  
an adolescent compared to other age groups.**

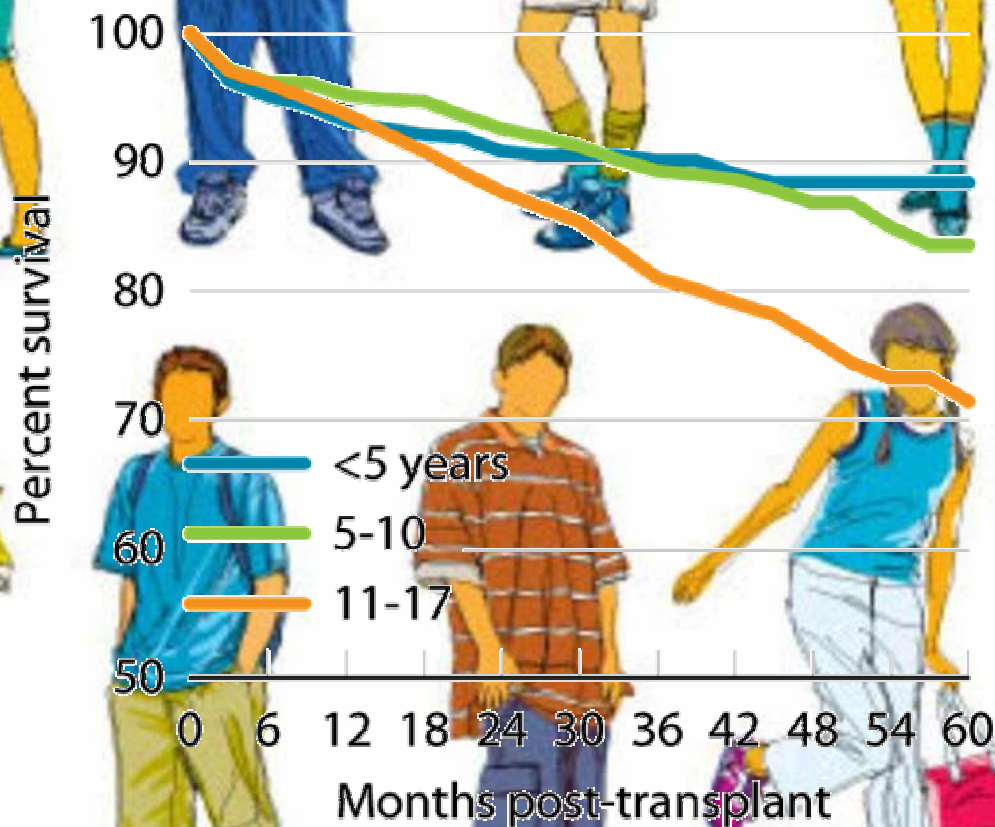


Duration of graft function was shorter if transplanted as an adolescent compared to other age groups. (Graft 1)



P=0.002

# Graft survival in pediatric patients, by age



first-time, kidney-only transplant recipients, age 0-17, transplanted 2002-2006 (N=3,719).



# Ten-year graft survival probabilities: all living donor transplants

Age	1980	1985	1990	1995	1996
<1			75	70	76
1 - 5		71	48	60	68
5 - 9	46	51	57	63	63
10 - 14	38	37	52	47	51
15 - 19	45	40	37	54	56
20 - 29	60	56	59	56	59

# Results

## Causes of graft loss

- So-named chronic allograft nephropathy was the cause of loss in the majority of cases (73.1%)
- Non adherence was thought to be the cause in 15.4%.
- Death with a functioning graft was observed in 2 patients (7.7%)

The background of the slide features a collage of stylized, colorful illustrations of people in various poses and outfits, representing a diverse population. The figures are rendered in a simple, graphic style with flat colors and no shading.

# Unexpected graft loss following transfer

- Graft lost was *unexpected* in 8/69 pts = **11.6%**
  - 2 patients had DFG.
- **In the remaining 6 patients 8.6%**
  - graft loss occurred at a mean of  $1.8 \pm 2$  years post transfer
  - median 1.1 years ranging from 1 month to 3 years.
- Cause of graft loss was non adherence in 4/6 patients.

# Risk factors for unexpected graft loss

- Gender, age at KTx, age at transfer, time interval between KTx and transfer, history of non adherence pre transfer, being unstable at transfer were not predictive of unexpected graft loss.
- However, *acute rejection episode* ( $p=0.002$ ) and *observed non adherence* ( $=0.012$ ) **within 2 years** of transfer were associated with unexpected graft loss.

# Risk factors for graft loss

	Unexpected graft loss (n=6)	Expected graft loss (n=20)	P value
Age at KTX	11.6 ± 4.1	10.3 ± 3.7	P= 0.465
% boys	50%	55%	P= 1.0
Graft survival	8.3 ± 3.6	13.6 ± 5.6	P= 0.04
Time interval KTX-transfer	6.5 ± 4.1	8.5 ± 3.8	P= 0.227
Obvious non-adherence within 2 years after transfer	3	1	P= 0.016
Acute rejection within 2 years after transfer	4	1	P= 0.002

The background of the slide features a collage of colorful, stylized illustrations of young people in various poses and outfits, representing a diverse group of individuals. The figures are scattered across the frame, with some partially cut off by the edges.

Trend for unexpected graft loss more frequent in

- young men ( age at transplant =  $16 \pm 2.6$  yo),
- transferred rapidly after transplant ( $1.7 \pm 2$  y)
- younger at age of transfer ( $17.7 \pm 1$  yo)
- graft survival shorter =  $7.2 \pm 2.8$  years






# Conclusions

- Unexpected graft loss occurred in 8.6% of the cohort.
- Risk factors for unexpected graft loss were non adherence and acute rejection *early after transfer*.
- Overall graft survival is shorter in adolescent.
- Patient transplanted during adolescence are not at a greater risk for graft loss (expected or unexpected) after transfer.

The background of the slide features a grid of colorful, stylized illustrations of young adults. The top row shows a woman in a green top and blue pants, a man in a blue t-shirt and shorts, a man in a white shirt and blue pants with a backpack, a woman in a red top and white jacket, a woman in a yellow top and green skirt, and a woman in a purple top and brown skirt. The bottom row shows a woman in a yellow top and grey pants, a man in a blue t-shirt and khaki pants, a man in a brown plaid shirt and blue shorts, a woman in a blue top and white pants carrying a pink bag, and a man in a green t-shirt and blue shorts holding a soccer ball. The text is centered over the middle of the grid.

# Transition clinic

- At the adult center,
- Young adults from peds center
- And other young adults.

A collection of colorful, stylized illustrations of young people in various poses and outfits, representing a diverse group of patients. The figures are scattered around the central text, with some partially cut off by the edges of the frame. The style is simple and graphic, using flat colors and clean lines.

**Transition clinic should be attentive to patients presenting with rejection and non adherence early after transfer in order to prevent unforeseen graft loss.**



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