Neonatal Kidney Grafts into Adult Recipients

F.J.G.	Gómez	Campderá
F.		Anaya
N.R.		Robles
M.A.		Rengel
F.		Valderrábano

Nephrology Service, Hospital General Gregorio Marañón, Madrid, Spain

Francisco Gómez-Campderá, Nephrology Service, Hospital General 'Gregorio Marañón', Dr. Esquerdo, 46, E-28007 Madrid (Spain)

Dear Sir,

Leunissen et al. [1] have recently reported the development of focal segmental glomerulosclerosis in 2 women who were grafted with block kidney transplants from neonatal donors. They concluded that neonatal kidneys should be utilized only for pediatric patients. Taking into account the scarce experience in this field, we wish to comment on some aspects of using grafts from neonatal donors. Although data of both cases are compatible with a focal segmental glomerulosclerosis secondary to hyper-filtration syndrome, immunofluorescence of a biopsy is not provided. This aspect has already been reported from transplantations from anencephalic donors [2].

In case no. 1, although a woman with oxalosis was successfully grafted, de novo membranous glomerulo-nephritis could not be excluded in spite of the fact that immunofluorescence was not done. Membranous glomerulonephritis was the most frequent de novo glomerulonephritis in our series, associated with a pathologic urinary tract after transplantation [3], as it was present in this case.

In case no. 2, the type of proliferative glomerulonephritis is not reported, and immunofluorescence was not done in order to exclude focal segmental glomerulosclerosis taking into account the rapid evolution of graft function failure.

Since 1976, we have performed 4 block kidney transplantations from neonate donors to adult recipients. Actually, 3 are functioning with a follow-up of 42 months (27–66). Nephrectomy of the patients' own kidneys was not performed.

The age and sex of the receptors, the etiology of chronic renal failure and the evolution of the graft and patients are shown in table 1.

Actually, no patients present clinical data of hyperfiltration syndrome, although they developed a rapid and important hypertrophy of the block kidney.

Table 1. Data on 4 block kidney transplantations from neonatal donors

Case

Date

UTO=Urinary tract obstruction; CGN=chronic glomerulonephritis; NS = nephroangiosclerosis; PKD = disease; Prot = proteinuria; HTA = arterial hypertension; Crs= serum creatinine. **ii** Urinary tract infections after transplantation. **b** Transplant artery stenosis resolved with percutaneous transluminal angioplasty.

■ ■ adult polycystic kidney

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Fine L: The biology of renal hypertrophy. *Kidney Int* 1986; 29:619–634.

Anderson S, Meyer TW, Brenner BM: The role of hemodynamic factors in the initiation and progression of renal disease. *J Urol* 1985;133:363–368.

Hostetter TH: The hyperfiltering glomerulus. *Med Clin North Am* 1984;68:387–398.

Preuss HG, Goldin H: Humoral regulation of compensatory renal growth. *Med Clin North Am* 1980;59:771–780.

Preuss HG: Compensatory renal growth symposium: An introduction, *Kidney Int* 1983;23:571–574.

Wesson LG: Compensatory growth and other growth responses of the kidney. *Nephron* 1989;51:149–184.

In the development of the renal hypertrophy [4], beside the genuine hemodynamic factors [5, 6] that play an important role, there are other factors, such as age, sex of receptor, remnant renal mass (previous bilateral nephrectomy), diet, hormones or immunosuppression [7–9]. **6** These factors must be analyzed in large series before exclusive criteria are established taking into account the **7** scarcity of donors, while the demand continuously rises.

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References

Leunissen KML, Bosman FT, Kootstra G, van der Berg-Loonen PM, van Hooff JP: Focal glomerulosclerosis in neonatal kidney grafts. *Nephron* 1989;51:29–31.