CHAPTER 11

PAEDIATRIC REPORT

Stephen McDonald
and
Jonathan Craig

During 2003, 67 children and adolescents (<20 years) commenced ESRD, 51 in Australia and 16 in New Zealand. Presented here are numbers and details of incident patients in this age group. Outcomes of paediatric renal replacement therapy were extensively covered in a publication released in June 2004 [1]; the use and effect of human growth hormone in Australia using the OZGROW database has also been described [2].

Due to the small numbers of incident and prevalent patients, the analyses for Australia and New Zealand are combined in the Tables below. The primary renal disease for the paediatric group who commenced treatment in Australia or New Zealand in 2003 is shown in Figure 11.1. As in previous years, glomerulonephritis dominated among older children, with a variety of causes among younger children.

Figure 11.1

Primary Renal Disease
Among Incident Paediatric Patients
1-Jan-2003 to 31-Dec-2003

Primary Renal Disease	Age Groups					
	<01	01-04	05-09	10-14	15-19	Total
Glomerulonephritis	-	-	5	3	18	**26**
Reflux	-	-	1	1	4	**6**
Hypoplasia and Dysplasia	1	2	1	1	-	**5**
Medullary Cystic Disease	-	1	1	2	1	**5**
Posterior Urethral Valves	-	1	1	2	4	**8**
Other	-	1	6	1	6	14
Uncertain Diagnosis	-	-	-	1	2	**3**
Total	**1**	**5**	**15**	**11**	**35**	**67**

Ninety-six kidney transplants were performed during 2003 to recipients who were in the paediatric age range (<20 years) at first renal replacement therapy. The age at time of transplantation and graft number is shown in Figure 11.2. For first and second grafts performed in 2003, live donors outnumbered deceased donors (fig 11.3).

Figure 11.2

Number of Grafts Performed in 2003

Age Groups	First Tx	Second Tx	Third Tx	Total
<5 years	9	-	-	**9**
5-9 years	13	-	-	**13**
10-14 years	13	-	-	**13**
15-19 years	20	1	-	**21**
20-24 years	11	5	-	**16**
25-29 years	-	6	1	**7**
>=30 years	-	11	6	**17**
Total	**66**	**23**	**7**	**96**

Figure 11.3

Donor Source 2003

Graft No.	Deceased	Live	Total
First	27	39	**66**
Second	11	12	**23**
Third	7	-	**7**
Total	**45**	**51**	**96**

During 2003, there were major changes in the paediatric data collection, instituted at the request of ANZPNA. These took effect for the survey 1-Oct-2003 to 31-Mar-2004, and included a move away from traditional items such as pubertal status and bone age towards collection of information about lipid measurements and the use of statins in this population. Response rates to these questions have been low, however it is expected this will improve in 2005. The utility of these new questions will be reviewed at the end of 2005.

Information was received for 260 children for the 1-Oct-2003 to 31-Mar-2004 period. Data about statin use were reported for 87% of patients, and indicated that use of this drug was unusual among paediatric patients. Reporting rates for lipid measures were much lower. These results are tabulated in Figure 11.4 but must be interpreted taking into account the frequency of missing values.

Figure 11.4

Cholesterol, Lipid and Statin Results 1-Oct-2003 to 31-Mar-2004

		No. of Patients	Percent
Cholesterol (mmol/l)	0 - 2.9	4	1.54
	3.0 - 3.9	29	11.15
	4.0 - 4.9	30	11.54
	5.0 - 5.9	16	6.15
	>=6	13	5.00
	Missing	168	64.62
	Total	**260**	**100%**
LDL (mmol/l)	0 - 0.9	3	1.15
	1.0 - 1.9	14	5.38
	2.0 - 2.9	26	10.00
	3.0 - 3.9	7	2.69
	>= 4	4	1.54
	Missing	206	79.23
	Total	260	**100%**
HDL (mmol/l)	0.8 - 1.1	26	10.00
	1.2 - 1.4	21	8.08
	>= 1.5	18	6.92
	Missing	195	75.00
	Total	**260**	**100%**
Triglycerides (mmol/l)	0 - 0.9	13	5.00
	1.0 -1.9	43	16.54
	2.0 - 2.9	19	7.31
	>= 3	14	5.38
	Missing	171	65.77
	Total	**260**	**100%**
Statins	No	205	78.85
	Yes	22	8.46
	Missing	33	12.69
	Total	**260**	**100%**

1. McDonald SP, Craig JC, on behalf of the Australia and New Zealand Paediatric Nephrology Association. Long term survival of children with end-stage renal disease. *N Engl J Med* 2004; 350:2654-2662.

2. Crompton CH, on behalf of the Australia and New Zealand Paediatric Nephrology Association. Long-term recombinant human growth hormone use in Australian children with renal disease. *Nephrology* 2004; 9:325-330.