

## [25 years of dialysis and kidney transplantation in children and adolescents].

[Article in German]

[Gämperli A](#)<sup>1</sup>, [Leumann E](#), [Neuhaus TJ](#), [Schlumpf R](#), [Largiadèr F](#).

### Author information

- <sup>1</sup>Universitäts-Kinderklinik Zürich.

### **Abstract**

Between 1970 and 1994 84 children and adolescents with end stage renal failure (ESRF) were started on renal replacement therapy (RRT). Renal transplantation was the main goal from the beginning. The long term results were evaluated with emphasis on survival, development and social integration. RRT was started in nearly half of the children (45%) between the age of 10 and 15 years and in 14% before 5 years. 52 patients were first treated by hemodialysis (HD) and 27 by peritoneal dialysis (PD, since 1979). 5 patients underwent preemptive transplantation. By December 1994, 75 patients had received 99 grafts, i.e. 75 1st, 21 2nd and 3 3rd grafts; 3 kidneys were from living related donors and 8 patients were transplanted elsewhere. 7 patients were still on dialysis and 2 had died before transplantation. Actuarial patient survival (Kaplan-Meier) after start of RRT is 88% at 10 years and 75% at 17-25 years. Actuarial patient survival after first transplantation increased from 91% (1970-1984) at 5 years to 97% (1985-1994). 7 of the first 10 patients transplanted from 1970-1974 are alive, all with functioning grafts (4 with their first graft). 9 patients died after transplantation: 4 of recurrent disease, 2 of viral (CMV, EBV) infections and 1 each of spinalioma, allergic shock and traffic accident. First graft survival was 37% at 10 years. It increased from 53% (1970-1984) to 72% (1985-1994) at 5 years. The main causes of first graft loss (n = 33) were irreversible rejection (21) and recurrent disease (7). All patients aged > 22 years were further evaluated: patients with start of RRT 1970-1979 (group A, n = 18) were compared with those starting RRT from 1980-1987 (B, n = 19). Mean adult height in A was less than in B (163.9 cm vs 168.5 cm in men; 146.3 cm vs 156.5 cm in women). 50% in A vs 32% in B had a disability. Fewer patients in A (39%) than in B (62%) were fully employed. Considerably more patients in A (61%) than in B (37%) lived with their parents or siblings although the mean age in A was 31 years vs 25 years in B. 3 women were married (all in B), 2 of them gave birth to 3 healthy children and the third was pregnant. Long term patient and graft survival, somatic development and social integration have improved over the years due to a variety of factors. A comprehensive approach is necessary in treating children with ESRF.