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Theme : PD in Pediatric Patients

## Outcomes of Long-Term Peritoneal Dialysis in Japanese Children

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**Objectives:** To analyze the data on outcomes of long-term peritoneal dialysis (PD) in children, based on the JSPPD registry. **Methods:** The data on patient survival, causes of death, and reasons for changing to hemodialysis were analyzed in 746 patients who started PD <16 years of age ( $8.1 \pm 4.8$  years) in 132 facilities during the periods 1991-2003. **Results:** The mean PD duration was  $3.4 \pm 3.1$  years. Approximately 80% used automated PD. Overall 5- and 8- year patient survival was 92% and 81%, respectively. There were 55 (7.4%) deaths. The mean PD duration of death cases was  $3.0 \pm 2.5$  years, 18 (33%) undergoing PD < 1 year and 39 (71%) < 5 years. The mean age was  $6.4 \pm 5.4$  at PD start and  $9.4 \pm 7.0$  years at death in all death cases, while, much younger in those on PD < 1 year ( $3.3 \pm 4.1$  and  $3.8 \pm 4.1$  years). The main causes of death were cardiovascular disease (36.4%), and infections (18.2%), including 2 episodes of peritonitis (3.6%). Changing to hemodialysis occurred in 102 (13.7%). The mean PD duration was  $4.9 \pm 2.7$  years, 53 (52%) undergoing PD < 5 years. The reasons were peritonitis (42.2%), ultrafiltration loss (22.5%), inadequate solute removal (12.7%), intra-abdominal surgery (3.9%), technical complications (2.9%), and others (15.7 %). However, ultrafiltration loss was more common (32.7 %) than peritonitis (26.5%) in those on PD > 5 years. **Conclusions:** Cardiovascular disease was the main cause of death in children. Although peritonitis was the most common reason for changing to hemodialysis, ultrafiltration loss was more common in those on longer PD. Achieving better volume control is important for long-term PD in children, preventing death and decreasing modality failure.