

Twenty Five Years Experience of Continuous Ambulatory Peritoneal Dialysis in a Single Center

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Background : Continuous ambulatory peritoneal dialysis (CAPD) is an established treatment of ESRD patients. We report 25 years experience of CAPD in our institution.

Methods : A single center and retrospective study was undertaken to investigate the outcomes of CAPD for 25 years. Total 2301 cases of CAPD were performed since 1981. Excluding patients with follow up duration less than 3 months and missing data, 1581 patients were included who started PD from November 1981 to December 2005. Data for sex, age, primary disease, patients survival, cause of death, technique survival and cause of technique failure were collected. Also, data were recruited for urea kinetic modeling in patients who started PD after 1990. We investigated peritonitis episodes and causative organism since 1992.

Results : Patients survival at 1, 3 and 5 year after CAPD commencement was 93.5%, 81.4% and 69.8%. Diabetes and age were independent risk factors for death. Subgroup analysis based on urea kinetic modeling revealed that dialysis adequacy didn't affect patients survival, whereas diabetes, older age and serum albumin were identified as significant risk factors. Technique survival at 1, 3 and 5 year was 94.5%, 82.6% and 70.1%. Sex, age and diabetes were not influential on technique outcomes. Technique survival was significantly higher in patients who started PD after 1993 compared with those before 1992. Peritonitis was the main reason for technique failure, followed by ultrafiltration failure. Overall peritonitis rate was 0.38 per patient-year. Diabetic patients showed higher peritonitis rate 0.34 ± 1.79 vs 0.50 ± 1.06 , $p=0.019$). Peritonitis rate was significantly decreased from 1992 to 2005. Staphylococcus coagulase negative was the most common causative organism for peritonitis. Whereas the incidence of gram positive peritonitis was gradually decreased, that of gram negative peritonitis was increased. Among gram positive peritonitis, methicillin resistant staphylococcus aureus and staphylococcus coagulase negative were increasingly prevalent.

Conclusion : We believe that this was the largest cohort study of CAPD patients in Korea. Technique survival improved probably due to decreased incidence of peritonitis. Diabetes, older age and serum albumin represented significant determinants for death. Meticulous attention for diabetic, older and malnourished patients was needed to improve patients survival.