

## **Continuous ambulatory peritoneal dialysis technique failure of adult patients treated at Universitas Academic Hospital, Bloemfontein, South Africa**

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### **Abstract**

**Background:** CAPD is one of the kidney replacement therapy modalities utilized in patients with kidney failure. It is a preferred modality in most resource limited settings as it is logistically more accessible and cost-effective. Technique failure remains a challenge and is associated with increased risk of morbidity and mortality. We aimed to describe the reasons for CAPD technique failure. Furthermore, to describe the CAPD patient survival over a 5-year period.

**Methods:** In this descriptive cross-sectional study, we conducted a retrospective file review of patients with ESKD whose PD catheter was removed or died while on the PD at Universitas Academic Hospital from 01 January 2015 until 31 December 2019. The demographic, clinical and laboratory data were collected from patient's medical records. Clinical outcomes were technique failure and patient's survival.

**Results:** Ninety-one patients met the inclusion criteria, of whom majority were males (56.0%). Median age at the start of PD was 40 (IQR, 18-58) years. Most patients were single (57.3%) and unemployed (70.0%). Hypertension was the leading cause of ESKD (51.7%) followed by HIV associated conditions (19.8%). Technique failure rate was 31.9%, 35.2%, 13.2%, 8.8%, and 11.0% at 1, 2, 3, 4 and 5 years respectively. Patient survival rate at 5 years was 63.7% with a median survival time of 26 (IQR 1-54) months. Peritonitis was the leading cause of technique failure (57.1%).

**Conclusions:** Peritonitis was the leading cause of technique failure. Younger patient's age and the use of Dianeal® PD system were associated with increased likelihood of technique failure. Socio-demographic, laboratory and clinical factors associated technique failure or death. Patient survival rate at 5 years was comparable with other published studies. Measures to prevent PD peritonitis needs to be put in place. Improving access to kidney transplantation is the ultimate goal of improving outcomes of the ESKD population.