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Article in *Nephrology Dialysis Transplantation* · May 2018

DOI: 10.1093/ndt/gfy104.FP497

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FP497

PREVALENCE OF PERITONITIS AND MORTALITY AMONGST PATIENTS ON PERITONEAL DIALYSIS IN AFRICA: A SYSTEMATIC REVIEW

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INTRODUCTION AND AIMS: Chronic kidney disease (CKD) remains a significant contributor to morbidity and mortality worldwide with a larger impact in Africa. Peritoneal dialysis (PD) is a desirable modality of renal replacement in Africa, however, due to several socio-economic factors, it is often complicated by PD-related peritonitis, the main contributor to morbidity and mortality amongst patients on PD. We sought to estimate the prevalence of PD-related peritonitis, causative organisms, all-cause mortality rate and rates of modality switch to haemodialysis in Africa.

METHODS: We conducted a systematic review of African studies conducted on African patients treated with PD published from the 1st of January 1980 to the 30th of June 2017. We searched through PubMed, SCOPUS, Africa Journal Online and Google Scholar. We conducted a narrative synthesis of available evidence. Key search terms were: 'peritoneal dialysis', 'peritonitis' and 'Africa'.

RESULTS: A total of 16 studies totalising 1512 patients were included from 96 identified studies; with most conducted in South Africa (50%). The number of patients per study ranged from 13 to 263. Mean age ranged from 9.3 ± 5.7 to 56 ± 25 years and the median time on PD from 7.0 to 27 months. The prevalence of PD-related peritonitis ranged from 0.55 to 2.8 episodes per patient-year, with earlier studies reporting the highest rates. Gram-positive organisms were the commonest cause of peritonitis and amongst gram-negative organisms, *Pseudomonas aeruginosa* predominated. *Mycobacterium tuberculosis* caused peritonitis in only 0.8-3% of cases where it was reported, while rates of fungal peritonitis ranged from 0.7% to 31%. High rates of culture-negative peritonitis were reported in most studies, ranging from 12.5 to 62.5%. Rates of modality switch to HD were 5% to 26.5% and peritonitis was the main reason for the switch. The all-cause mortality rates ranged between 0 and 38.7%, with peritonitis reported as the main contributor to death.

CONCLUSIONS: High rates of PD-related peritonitis are seen in African patients receiving PD, with a significant proportion requiring modality switch from PD to HD. There is a trend towards decline in PD-peritonitis rates from earlier studies. The median duration of PD use in most studies was short. Despite PD being the desired renal replacement modality for African patients, its use is complicated by high PD related-peritonitis and all-cause mortality rates. PD centres in the region must do more to optimize the outcomes of PD use.