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## Comparison of topical Chlorhexidine and Mupirocin for the prevention of exit-site infection in incident peritoneal dialysis patients

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**Objective:** Prevention of exit site infection (ESI) is of paramount importance to peritoneal dialysis (PD) patients. The aim of this study was to evaluate the effectiveness of chlorhexidine in the prevention of ESI in incident PD patients compared with mupirocin.

**Methods:** This retrospective, pre-test/post-test observational study included all incident PD patients at Singapore General Hospital from 2012 to 2015. Patients received daily topical exit-site application of either mupirocin (2012-2013) or chlorhexidine (2014-2015) in addition to routine exit-site cleaning with 10% povidone-iodine. The primary outcome was ESI rate during the 2 time periods. Secondary outcomes were peritonitis rate, times to first ESI and peritonitis, hospitalization rate and infection-related catheter removal. Event rates were analyzed using Poisson regression and infection-free survival was estimated using Kaplan-Meier and Cox regression survival analyses.

**Results:** The study included 162 patients in the mupirocin period (follow-up 141.5 patient-years) and 175 patients in the chlorhexidine period (follow-up 136.9 patient-years). Compared with mupirocin-treated patients, chlorhexidine-treated patients experienced more frequent ESIs (0.22 vs 0.12 episodes/patient-year, p=0.048), although this was no longer statistically significant following multivariable analysis (incidence rate ratio [IRR] 1.78, 95% confidence interval [CI] 0.98-3.26, p=0.06). No significant differences were observed between the 2 groups with respect to time to first ESI (p=0.10), peritonitis rate (p=0.95), time to first peritonitis (p=0.60), hospitalization rate (p=0.21) or catheter removal rate (0.03 vs. 0.04/patient-year, p=0.56).

**Conclusions**: Topical exit-site application of chlorhexidine cream was associated with a borderline significant, higher rate of ESI in incident PD patients compared with mupirocin cream.

## Biography

Htay Htay is a Nephrologist at Department of Renal Medicine, Singapore General Hospital. She was graduated from University of Medicine, Myanmar and received Master of Medicine (Internal Medicine) from the National University of Singapore. She has completed her basic specialist training in Internal Medicine and advanced specialist training in Nephrology at Singapore General Hospital. She has also completed her Fellowship training at Nephrology Department, Princess Alexandra Hospital, Brisbane, Australia. She is a Member of Royal College of Physician, International Society of Peritoneal Dialysis and Singapore Society of Nephrology

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