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Factors affecting peritonitis and mortality in PD patients

Taeyeon HWANG, Woori CHO, Yoon kyung CHOI, Jihyun YANG, Myung-gyu KIM, Sang-kyung JO, *Won-yong CHO

Department of Internal Medicine, Division of Nephrology, Korea university medical college, Korea, South

Objectives : With changing pattern of clinical practice including use of more biocompatible fluid, control of blood pressure and calcium, phosphate, we investigated risk factors affecting peritonitis, the most common complication of technical failure and also mortality in PD patients.

Methods : This is a retrospective cohort study in Korea University Anam Hospital wherein total 640 patients who initiated and were maintained for more than 3 months from March 2002 to March 2015 were followed. Their medical records and laboratory findings, peritonitis episodes and mortality were reviewed. This study was approved by Korea university institute of review board (ED 15124).

Results : Median follow up period was 66.4 months, wherein 247 patient experienced peritonitis at least once. In multivariate logistic regression analysis, only decreased residual renal function was an independent risk factor for peritonitis ($p=0.01$, RR 0.53, 95% CI 0.31–0.88). Advanced age ($p=0.03$, RR 1.14, CI 1.007–1.305), higher CRP ($p=0.019$, RR 1.005, CI 1.001–1.009), higher BMI ($p=0.035$, RR=1.067, CI 1.01–1.13), lower albumin ($p=0.001$, RR 0.537, CI 0.37–0.78), higher uncorrected serum calcium level ($p=0.004$, RR 1.406, CI 1.12–1.77) at the time of initiation of PD were found to be an independent factor predicting all cause mortality predictors in Cox-regression analysis.

Conclusions : Our study demonstrated that decreased residual renal function is a risk factor for peritonitis. Advanced age, higher CRP, BMI, uncorrected serum calcium level and lower albumin level at the time of initiation of PD were risk factors for all cause mortality in PD patients.

Keywords : Factors affecting peritonitis, mortality risk factors in PD patients