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# Risk Factors for Peritoneal Dialysis Peritonitis in Continuous Ambulatory Peritoneal Dialysis Patients

Seung Hyeok Han · Sang Cheol Lee · Song Vogue Ahn* · Jung Eun Lee · Hoon Young Choi
Bum Suk Kim · Shin Wook Kang · Kyu Hun Choi · Ho Yung Lee · Dae-Suk Han

*Department of Internal Medicine, College of Medicine, Yonsei University, Preventive Medicine*, Seoul, Korea*

**Background :** Peritoneal dialysis (PD) peritonitis is the most common cause of technique failure in CAPD patients. Assessment of risk factors for peritonitis is needed to prevent such PD related complication.

**Methods :** Total 165 patients were included who started PD from January 2000 to December 2004. We conducted two analyses of the first and the second PD peritonitis (recurrence). For baseline data of the first analysis, data within 1 month of PD commencement were collected. Data at 1 month after the complete resolution of the first peritonitis were considered as baseline for the second analysis. To examine the effect of patients' current status on the development of peritonitis, data at 1 month before the first and the second peritonitis were collected. For comparison, data at last follow up were also collected in peritonitis free and recurrence free group.

**Results :** Total 171 peritonitis episodes were recorded in 87 patients. Univariate analysis based on baseline data showed that diabetes was less prevalent and hemoglobin, serum albumin and residual renal function (RRF) were higher in peritonitis free group. However, multivariate analysis revealed that only diabetes and RRF were independent risk factors. Univariate analysis based on data at 1 month before the first peritonitis showed that peritonitis group had lower levels of hemoglobin, BUN, creatinine, serum albumin and phosphorus. Multivariate analysis adjusted for these factors showed that lower levels of hemoglobin and serum albumin were independent risk factors. We performed the same analysis for recurrence of PD peritonitis. Information on residual GFR was unavailable due to lack of data. As the results of analysis of the first peritonitis, diabetes, anemia and serum albumin were identified as significant predictors for recurrence of PD peritonitis.

**Conclusion :** This study showed that RRF, diabetes, anemia and serum albumin were significant determinants for PD peritonitis. Whereas baseline hemoglobin and serum albumin were not independent risk factors for peritonitis, those levels at 1 month before peritonitis episode were identified as independent risk factors. This implies that not initial but current status may be more important in the development of peritonitis. Preservation of RRF, correction of anemia and maintenance of nutritional status is needed to reduce PD peritonitis.