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혈액투석 환자에서 적혈구 크기 분포가 사망률에 끼치는 영향

한림대학교 의과대학 내과학교실, 한림대학교 신장연구소

최명진, 류지원, 조아진, 이영기, 신동호, 김수진, 오지은
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The Impact of Red Cell Distribution width on Mortality in Chronic Hemodialysis Patients

Myung-Jin Choi, Ji-Won Ryu, A-Jin Cho, Young-Ki Lee, Dong-Ho Shin, Soo-Jin Kim
Ji-Eun Oh, Jang-Won Seo, Jwa-Kyung Kim, Young-Rim Song, Sung-Gyun Kim
Hyung-Jik Kim, Ja-Ryong Koo, Jong-Woo Yoon, Jung-Woo Noh

Department of Internal Medicine College of Medicine Hallym University
Hallym Kidney Research Institute

Background: Red cell distribution width (RDW), a measure of the erythrocyte variabiltiy and heterogeneity, is a strong predictor of adverse outcomes in patients with cardiovascular disease. However, no studies have investigated the impact of RDW on cardiovascular complication and mortality in chronic hemodialysis (HD) patients.
Methods: 177 chronic HD patients (age 57.8±12.0 years, male 48.0 %, diabetes 54.8%, mean dialysis duration 48.4± 51.1 months) were enrolled. After baseline evaluation, all patients were monitored continuously for the development of coronary artery disease, cerebrovascular disease and death.
Results: RDW was 14.29±0.11% (range 7.86 to 17.30). Patients were divided into 2 groups according to median RDW at baseline (14.35%). Patients with higher MPV levels (n=89) had lower levels of anemia, albumin, total cholesterol, triglyceride, LDL cholesterol and HbA1c. During a follow-up period of mean 25 months, 68 composite events (33 deaths, 25 coronary artery disease, 10 cerebral artery disease) occurred. The Kaplan-Meier curve showed significant difference between two groups in the cumulative events of all-cause death (11.36% vs 25.84%; log-rank test, p=0.006) and cardiovascular death (3.41% vs 14.61%; log-rank test, p=0.004). In multivariate Cox analysis, RDW was an independent risk factor for all-cause mortality (hazard ratio (HR), 1.52; 95% confidence interval (CI), 1.64 to 2.18; p=0.021) and cardiovascular mortality (HR, 3.35; 95% CI, 1.56 to 7.17; p=0.002). There were no significant differences between the two groups in coronary artery disease and cerebral artery disease.
Conclusion: Higher RDW level was significantly associated with increased all-cause and cardiovascular mortality.

Key Words: 혈액투석, 사망률, 적혈구 크기 분포
Hemodialysis, Mortality, Red cell distribution width