

투석을 시작하는 말기 신질환 환자에서 적혈구분포폭(red blood cell distribution width) 증가의 임상적 의미

가톨릭대학교 의과대학 내과학교실 신장내과

윤혜은, 김성준, 정성진, 양철우, 김용수, 장윤식, 신석준

Clinical Significance of Increase in Red Blood Cell Distribution width in Incident Dialysis Patients

Hye Eun Yoon, Sung Jun Kim, Sungjin Chung, Chul Woo Yang
Yong-Soo Kim, Yoon Sik Chang, Seok Joon Shin

Division of Nephrology Department of Internal Medicine College of Medicine
The Catholic University of Korea

Aim: Red cell distribution width (RDW) represents the variability of sizes of circulating erythrocytes. RDW is a robust marker of adverse clinical outcomes in patients with cardiovascular diseases. However the clinical significance of increase in RDW is undetermined in incident dialysis patients.

Methods: Three hundred and thirty seven incident dialysis patients were included. Temporal changes in RDW during 12 months after the start of dialysis were assessed by calculating the coefficient by linear regression. Patients were divided in two groups; RDW-decreased group included those with negative coefficient values (n=184), and RDW-increased group included those with positive coefficient values (n=153). We investigated whether increase in RDW was predictive for cardiovascular events (CVE) and deaths.

Results: The RDW-increased group showed significantly older age, higher serum calcium, and lower serum phosphorus and calcium-phosphorus product levels at baseline compared with the RDW-decreased group. During a median follow-up for 2.6 years (range, 0.3-7.7 years), 66 non-fatal CVE (19.6%) and 82 deaths (24.3%) occurred. The RDW-increased group showed significantly lower event-free survival rate for non-fatal CVE and deaths compared with the RDW-decreased group (p=0.009). In multivariate analysis, increase in RDW was an independent predictor for CVE and deaths (hazard ratio, 1.46; p=0.038).

Conclusions: Increase in RDW independently predicted adverse outcomes in incident dialysis patients. Assessing the change in RDW after starting dialysis may be helpful to identify high risk patients for CVE or death.

Key Words: 적혈구분포폭, 투석, 심혈관질환

Red blood cell distribution width, Dialysis, Cardiovascular disease