P-184

혈액투석 시작시점에서 추정사구체여과율 공식에 대한 비교

아주대학교의과대학 신장내과

이민정, 김세란, 박인휘, 김흥수, 신규태

The Comparison of Estimated Glomerular Filtration Rate Equations at the Time of Hemodialysis Initiation

Min-Jeong Lee, Seirhan Kim, Inwhee Park, Heungsoo Kim, Gyu-Tae Shin

Ajou University School of Medicine Department of Nephrology

Background: Estimated glomerular filtration rate (eGFR) is one of the most important guidelines in deciding the optimal timing of dialysis initiation, however, the eGFR are different according to the utilized eGFR equations. In the present study, we calculated the eGFR at the time of hemodialysis (HD) initiation using five commonly used equations in relation to clinical and laboratory characteristics of the patients.

Methods: We retrospectively analyzed 409 end stage renal disease patients who were newly started on HD treatment in our institution. The eGFR included the Cockcroft-Gault equation, the Cockcroft-Gault equation corrected for body surface area, the MDRD equation, the CKD-EPI equation and the Nankivell equation.

Results: The mean eGFRs at HD start were significantly different across the equations. The mean eGFR was 7.8 ml per minute for the corrected Cockcroft-Gault equation, 7.7 ml per minute for the Cockcroft-Gault equation, 6.2 ml per minute for the MDRD equation, and 5.6 ml per minute for the CKD-EPI equation. The Nankivell equation was not suitable for CKD patients. The corrected Cockcroft-Gault, the MDRD and the CKD-EPI equations were well correlated with all CKD specific complications including hypertension, anemia, hyperkalemia, metabolic acidosis, hypocalcemia, hyperphosphatemia and hyperparathyroidism. The mean eGFR calculated by the corrected Cockcroft-Gault equation showed the lowest coefficient of variation among all the equations. DM patients started HD at a higher eGFR than non-DM patients. The mean eGFR of the patients who started HD urgently in ER was not different compared to that of the non-emergent patients, however, the ER patients had a higher incidence of fluid overload and electrolyte disturbances.

Conclusions: We provide information on the difference of various eGFR in relation to the clinical and laboratory characteristics of the patients at the time of hemodialysis initiation.

Key Words: 시작, 혈액투석, 추정사구체여과율
Initiation, Hemodialysis, Estimated glomerular filtration rate