

한국인 만성 신장병 환자의 Platelet function analyzer-100 폐색시간의 변화와 영향 인자들

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Prevalence of Abnormal in vitro Closure Time using the Platelet Function Analyzer-100 in Chronic Kidney Disease Patients and Analysis of Associated Factors

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Aim: Platelet Function Analyzer-100 evaluates platelet function by determining time to occlusion of an aperture in a membrane coated with collagen and epinephrine (CEPI) or collagen and ADP (CADP) during the flow of citrated whole blood. We sought to evaluate prevalence of abnormal in vitro closure time (CT) in chronic kidney disease (CKD) patients and to analyze associated factors.

Materials and Methods: CEPI-CT (normal, 82-182 sec in Korean), CADP-CT (normal, 62-109 sec), CBC, serum creatinine (Cr) and blood urea nitrogen (BUN) were measured in CKD patients, 30 with stage I, 36 with stage II, 30 with stage III, 56 with stage IV, 283 with stage V (79 with predialysis stage V, 130 on chronic hemodialysis (CHD), and 74 on chronic peritoneal dialysis (CPD)). Estimated glomerular filtration rate (eGFR) was calculated with a MDRD equation.

Results: Abnormal CEPI-CT and CADP-CT occurred in <15% of stage I-III, 20% of stage IV, and 41% and 54%, respectively, of stage V patients. There were no differences in prevalence of abnormal CEPI-CT and CADP-CT among predialysis stage V, CHD and CPD patients. CEPI-CT and CADP-CT were correlated with BUN, Cr and platelet counts in predialysis patients, and with platelet counts in dialysis patients, and CEPI-CT was correlated with BUN, Cr in CPD patients. Neither, however, was correlated with age, gender, hemoglobin or hematocrit.

Conclusion: Prevalence of abnormal in vitro CT increases as stage worsens in CKD patients. In vitro CT is correlated with BUN, Cr and platelet counts in predialysis and total CKD patients.

Key Words: PFA-100 폐색시간, 만성신장병, 혈소판기능
Platelet, CKD, in vitro CT, PFA-100