

만성 신질환 환자에서 하부위장관 병변의 진단에 대한 대변잠혈검사의 유용성

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Diagnostic Utility of Immunochemical Fecal Occult Blood Tests to Detect Lower Gastrointestinal Lesions in Patients with Chronic Kidney Disease

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Background: Chronic kidney disease (CKD) is frequently associated with bleeding-related gastrointestinal (GI) lesions and immunochemical fecal occult blood test (iFOBT) is a simple method to predict lower GI bleeding. However, few studies investigated bleeding-related lower GI lesions in CKD patients and the diagnostic usefulness of iFOBT is undetermined.

Methods: We included a total 783 patients with nondialysis-dependent CKD stages 3-5 or receiving dialysis. The bleeding-related lower GI lesions identified by colonoscopy were investigated, and the diagnostic utility of iFOBT was evaluated for these lesions.

Results: Bleeding-related lower GI lesions were found in 14.3% of 617 patients with CKD stage 3, 20.0% of 70 patients with CKD stage 4/5, and 32.3% of 96 patients receiving dialysis ($p < 0.001$). Compared with CKD 3 patients, adjusted odds ratio for bleeding-related lesion were 2.25 (95% confidence interval, 1.18 to 4.31; $p = 0.014$) in dialysis patients. The iFOBT was positive in 125 (16.0%) patients and area under the receiver operating curves for bleeding-related lesion was 0.64 ($p < 0.001$). The sensitivity of iFOBT is increased as CKD stage worsened (29.5% vs. 50.0% vs. 58.1%; $p = 0.012$). However, the specificity of iFOBT was decreased with the severity of CKD stage (92.6% vs. 75.0% vs. 67.7%; $p < 0.001$) in detecting lower GI lesions. The negative predictive value was decreased in a similar pattern (88.8% vs. 85.7% vs. 77.2%; $p = 0.039$), and positive predictive value did not differ between different CKD stages ($p = 0.617$).

Conclusions: The bleeding-related lower GI lesions were increased as the severity of CKD stage worsened, and iFOBT is more sensitive to predict these GI lesions in patients with higher stage of CKD. However, iFOBT should be used in these patients because its specificity and negative predictive value is poor.

Key Words: 만성 신질환, 대변 잠혈, 하부위장관

Chronic kidney disease, Fecal occult blood, Lower GI tract