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만성신부전 환자에서 상부위장관 출혈병소를 예측하기 위한 혈액검사의 유용성

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최유아, 이정은, 윤경진, 이상주, 장윤경, 양철우, 김석영, 황현석

Utility of Blood Tests to Predict Upper Gastrointestinal Lesions in Patients with Chronic Kidney Disease

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Objective: Anemia and iron deficiency are common complications in patients with chronic kidney disease (CKD). However, information about the diagnostic indicators of bleeding-related upper-gastrointestinal (GI) lesions is sparse and few studies have investigated anemic upper-GI lesions.

Methods: We included 165 anemic patients with nondialysis-dependent CKD stages 3-5 (44 patients at stage 3, 52 patients at stage 4, and 69 patients at stage 5). Transferrin saturation (TSAT), serum ferritin, mean corpuscular volume (MCV), and corrected reticulocyte count data were collected to evaluate their diagnostic utility for bleeding-related upper-GI lesions, which were identified by esophagogastroduodenoscopy.

Results: Bleeding-related GI lesions were found in 57 (34.5%) patients. The area under the receiver-operating characteristic curve used to predict bleeding-related lesions was 0.63 for TSAT (p=0.007) and the best cutoff value was 19.7% (sensitivity, 0.53; specificity, 0.76). The combination of cutoffs TSAT <20% or serum ferritin <100 ng/mL produced a 17% increment in sensitivity compared with that of TSAT <20% alone. The corrected reticulocyte levels and MCV had no significant diagnostic utility. In patients with CKD stage 5, the sensitivity of TSAT or its combination with serum ferritin was significantly lower than in patients with CKD stage 3 (all P< 0.05).

Conclusions: TSAT is a significant predictor of anemic lesions in the upper-GI tract and serum ferritin can increase the sensitivity of TSAT. However, these indicators should be used with caution in patients with CKD stage 5 because their sensitivity is poor in this context.

Key Words: 만성신부전, 빈혈, 철결핍, 내시경
Chronic kidney disease, Anemia, Iron deficiency, Endoscopy