CLINICAL FACTORS ASSOCIATED WITH CONSTIPATION IN HEMODIALYSIS PATIENTS

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Introduction and Aims: Constipation, which reduces patient’s quality of life and generates significant healthcare costs associated with diagnosis and treatment, is a worldwide public health problem. Little is known about pathogenic mechanisms explaining its quite high prevalence in patients on hemodialysis (HD). We examined association between constipation and clinical factors peculiar to HD, such as dialysis adequacy, body fluid fluctuation, comorbidities, inflammation, malnutrition, and hyperhomocysteinemia.

Methods: In this two-center, cross-sectional study, clinical factors associated with a regular use of laxatives were examined. We compared patients’ demographic parameters, Kt/V urea, interdialytic weight gain after a 2-day interval without HD, serum levels of albumin, high-sensitivity C-reactive protein, β2-microglobulin, plasma total homocysteine (tHcy) levels, and the administration of sevelamer hydrochloride between laxative users and non-laxative users.

Results: Among 136 patients (male: female = 92:44, age 67 ± 12 years, HD duration 103 ± 103 months), 90 (66.2%) regularly used laxatives. The laxative users were significantly older (69 ± 12 vs. 64 ± 12 years, P = 0.006) and displayed significantly higher plasma tHcy levels (56.2 ± 55.3 vs. 41.6 ± 28.8 μmol/L, P = 0.03) than the non-laxative users. In addition, the proportion of female patients was higher in the laxative users (38.9% vs. 19.6%, P = 0.02). In multiple logistic regression analysis, higher age (Odds ratio [OR] 1.070, 95% confidence interval [CI] 1.023-1.120, P = 0.003), female sex (OR 8.777, 95% CI 2.215-36.255, P = 0.003), diabetes mellitus (OR 2.978, 95% CI 1.099-8.068, P = 0.03), and higher plasma tHcy levels (OR 1.150, 95% CI 1.002-1.319 [per 10-μmol/L increase], P = 0.04) were found to be independently associated with laxative use.

Conclusions: It is notable that hyperhomocysteinemia was independently associated with constipation in HD patients. Some studies have suggested that homocysteine may decrease intestinal motility. It seems that the high prevalence of diabetes mellitus and hyperhomocysteinemia in HD can partly explain the fact that many patients suffer from constipation and use laxatives regularly.

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