Editorial

Assessment of Medication Adherence and Pharmacist Intervention Are Important for the Care of Patients with Inflammatory Bowel Disease

Eun Sil Kim[1] and Ben Kang[2]

[1]Department of Pediatrics, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine, Seoul, and [2]Department of Pediatrics, School of Medicine, Kyungpook National University, Daegu, Korea

Corresponding Author
Ben Kang
ORCID https://orcid.org/0000-0002-8516-9803
E-mail benkang@knu.ac.kr

See "Improvement in Medication Adherence after Pharmacist Intervention Is Associated with Favorable Clinical Outcomes in Patients with Ulcerative Colitis" by Jae Song Kim, et al. on page 736, Vol. 16, No. 5, 2022.

Considering the requirement of life-long management in patients with inflammatory bowel disease (IBD), adherence to medication is a crucial factor in the management of patients with ulcerative colitis (UC) and Crohn's disease.[1] Previous studies have demonstrated that non-adherence affects 40% to 60% of patients with UC, and has a substantial impact on the course of the disease.[2,3] Non-adherence to treatment in patients with IBD may negatively influence patient outcomes, such as increased risk of flares or hospitalization, leading to increased healthcare resource use and costs.[3-6] Thus, improving medication adherence in the treatment of IBD is a significant challenge for clinicians.

Three factors create barriers to medication adherence; patients, clinicians and health care system factors.[7] Patient factors include inadequate participation in the decision-making process during treatment, previous unpleasant experiences with drugs, poor medical knowledge about their underlying disease, and misbeliefs regarding medication efficacy. Clinician factors include complex prescription and insufficient explanation regarding the effectiveness and side effects of medications. Health care system factors include insurance and accessibility. Taking into account of these factors, it is possible to increase treatment adherence by the intervention of a multidisciplinary team including pharmacists.

Investigating the relationship between medication adherence and clinical outcomes after pharmacist intervention in patients with UC is essential for improving the therapeutic strategy of IBD. Kim *et al.*[8] demonstrated

that pharmacist intervention had a significant impact on medication adherence and disease outcome in UC. In this study, the clinical outcomes were compared by dividing non-adherers into the control and intervention groups. The authors found that the non-adherence rate significantly decreased from 60.6% to 30.3% after 6 months in the pharmacist intervention group. In addition, pharmacist intervention affected time-related partial Mayo score, which decreased by 0.094 every month. Moreover, pharmacist intervention (adjusted odds ratio [OR], 0.370; 95% confidence interval [CI], 0.0145 to 0.945; p=0.038) as well as factors associated with disease severity such as baseline partial Mayo score (adjusted OR, 1.333; 95% CI, 1.039 to 1.710; p=0.024) and history of 1-year prior corticosteroid use (adjusted OR, 3.312; 95% CI, 1.035 to 10.597; p=0.044) were independent factors influencing flare up-free survival.

Special interest should also be focused on the assessment of medication adherence. The assessment of medication adherence can be divided into direct and indirect methods.[7,9] Direct methods refer to the measurement of drug or metabolite levels, which is capable of revealing whether the patient has been adherent to not to a specific medication. In the treatment of IBD, thiopurine metabolite monitoring is currently used to assess adherence in patients taking thiopurines. However, its use is currently limited in many centers worldwide. Meanwhile, indirect methods include patient questionnaires, patient diaries, pill counts, rates of prescription refills, assessment of pa-

tient's clinical response, electronic medication monitors or measurement of physiologic markers. While self-reported questionnaires or patient diaries are subjective and are inclined to a certain degree of bias, objective measures such as pill counts or electronic medication monitors including medication possession ratio or proportion of days covered are simple and possess the apparent potential to best measure treatment adherence. In this point of view, Kim *et al.*[8] used an indirect, however objective method, by investigating medication possession ratio to assess medication adherence in patients. It is now time for IBD specialists to focus on assessing medication adherence in real-world practice.

As IBD treatment requires patient-centered treatment and multidisciplinary team approach, there is a need for increased awareness of assessing medication adherence, and subsequent pharmacist intervention to improve medication adherence and disease outcomes in patients with IBD. A collaborative approach among gastroenterologists and pharmacists in treating patients with IBD is required to improve medication adherence and furthermore possibly help reach the target and eventually modify the natural course of disease in the era of treat-to-target.[10]

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

ORCID

Eun Sil Kim   https://orcid.org/0000-0003-2012-9867
Ben Kang   https://orcid.org/0000-0002-8516-9803

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