



Corticosteroid, a double-edged sword in inflammatory bowel disease management: possibility of reducing corticosteroid use through physician education

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Article: Physician education can minimize inappropriate steroid use in patients with inflammatory bowel disease: the ACTION study (**Intest Res 2022;20:452-463**)

Inflammatory bowel disease (IBD) treatment has progressed greatly over the past 20 years since the launch of the first biologics, infliximab. However, despite the introduction of new biologics and small molecules, conventional therapies still play an important role in IBD treatment. Corticosteroids, one of the principal conventional therapies, have been used for the treatment of IBD since the 1950s, and because they can induce clinical remission rapidly, they play an essential role in the treatment of active moderate to severe IBD.¹ Although corticosteroids are fast and effective for inducing IBD remission, the effectiveness of corticosteroids in maintaining remission is limited and various side effects are recognized; prolonged use of steroids can result in serious adverse events including bone loss, infection, adrenal insufficiency, immunosuppression, hyperglycemia, and even increased mortality.² Therefore, cautious use of steroids is currently emphasized to reduce misuse. Both the British Society of Gastroenterology and the European Crohn's and Colitis Organisation recommend reducing steroid use and misuse, and advise treatment escalation for all steroid-dependent patients.³⁻⁵ The IBD Study Group of the Korean Association for the Study of Intestinal Diseases

also recommends that oral steroids should not be provided as first-line therapy in mild to moderate ulcerative colitis (UC), and if corticosteroids are used as the first-line induction therapy for moderate to severe Crohn's disease (CD), a gradual dose reduction is advised.⁶

In this issue of *Intestinal Research*, Park et al.⁷ conducted "A retrospective Chart review to observe The use of steroids In managing patients with inflammatory bowel disease iN South Korea (ACTION)" to investigate the current status of steroid use in the treatment of IBD in South Korea and to evaluate the effect of educating physicians on excessive and/or inappropriate steroid use using a cohort of patients with IBD recruited from 5 centers across the representative geographic regions of South Korea from May 14, 2018, to July 18, 2019. Of the 1,685 participants (660 CD and 1,025 UC), 9.2% (n = 155) experienced steroid exposure in the past 12 months, of which 29.7% (n = 46) had excessive steroid use and 10.3% (n = 16) had inappropriate steroid use. When compared according to disease type, the overall steroid exposure rate was higher in UC patients than in CD patients (10.7% vs. 6.8%), and the frequency of steroid dependency (69.1% vs. 57.8%) and excessive steroid use (34.6% vs. 17.8%) were also higher in UC patients than in CD patients, respectively. The authors also evaluated the impact of physician education on steroid use by constructing another cohort 1 year after physical education, and the frequency of excessive steroid use (from 29.7% to 20%), steroid dependency (from

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65.8% to 28.1%), and steroid refractoriness (from 40.7% to 7.5%) all significantly decreased, although overall steroid exposure did not change significantly after 1 year of physician education. Altered patterns of steroid use, increased clinical remission, and decreased hospitalization were also observed in this cohort, suggesting that changes in steroid use patterns after educating physicians can lead to improvement in the course of IBD. Disease severity in UC patients was a risk factor for excessive steroid use in both cohorts before educating physicians (odds ratio, 1.13; 95% confidence interval, 1.01–1.27) and after educating physicians (odds ratio, 1.19; 95% confidence interval, 1.04–1.37), but not in CD. This observational study provides the first real-world data on steroid use in South Korean IBD patients. In addition, this study is significant in that it provides evidence that appropriate physician education could change steroid use patterns and, through this, improve the clinical course of IBD. However, since this study is an observational study, there is a limitation in that it cannot prove a direct causal relationship between physician education and steroid use. In addition, the inclusion of only patients with follow-up for > 12 months may have contributed to the exclusion of new-onset patients who were prescribed steroids to induce remission, which may have resulted in an underestimated frequency of steroid use. Despite clear evidence that corticosteroids are effective for inducing remission of IBD in the short term, but cause various adverse effects in patients, we have yet to identify the risk factors of corticosteroid excess and establish definite strategies to reduce unnecessary corticosteroid exposure in IBD patients. In addition to the disease severity of UC patients presented in this study, the CD patients' B2/B3 behavior pattern and previous biologic use have also been reported as risk factors for corticosteroid use.⁸ There are few steroid-sparing agents, and the high financial burden and low accessibility of steroid-sparing agents are also important factors to consider when devising a strategy to reduce corticosteroid use practically.⁹ Although physician education can be an affordable and realistic strategy for reducing corticosteroid use, a previous study reported that physician education has a limited role in the treatment of IBD such as increasing vaccination rates and the performance of tests that must be conducted prior to administration of biologics.¹⁰ However, this study highlighted the important role of physician education in reducing corticosteroid use and suggested a new way to correct the pattern of corticosteroid use, which plays a direct and important impact in IBD treatment. By establishing clinical strategies that consider potential risk factors for corticosteroid excess and

educating physicians, we expect to reduce unnecessary corticosteroid use, which could ultimately lead to improved IBD treatment.

ADDITIONAL INFORMATION

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Conflict of Interest

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