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Conflicts of interest

The authors disclose no conflicts.

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Dietary Fiber Intake and Crohn's Disease

Dear Sir:

We read with interest, as well as some alarm, the article by Ananthakrishnan and its accompanying editorial by Kaplan in the November 2013 issue of *Gastroenterology*.^{1,2} These authors suggest that increased dietary fiber intake, specifically from fruits, may have a protective effect on development of Crohn's disease (CD) but not ulcerative colitis. They postulate 2 potential mechanism, including changes in the composition of the microbiota and increased fermentation of fiber from fruit into short chain fatty acids leading to decreased proinflammatory mediators, as well as increased activation of the aryl hydrocarbon receptor leading to improved protection against environmental insults.¹

Although we do not dispute this interesting hypothesis, we do question the author's conclusion that there is no "reverse causation," where decreased fiber consumption is caused by symptoms related to undiagnosed CD. The article does not include gastrointestinal symptoms as part of their analysis, and as such, we are not able to assess how long patients were symptomatic before diagnosis. A study from Manitoba suggests that patients have a prolonged duration of symptoms before diagnosis of CD, with the lag time of symptom onset to diagnosis increasing at older ages of diagnosis.³ With this cohort, the median age at diagnosis of CD was 52 years with 1 patient diagnosed at age 85!

The authors did perform a lag analysis utilizing fiber data from 2 to 4 years before the diagnosis of CD, which did show fiber derived from fruit remained a significant predictor of CD, and the overall dietary fiber was only "weakly attenuated." This is the time period where symptoms are most likely develop, so it is not surprising that fiber was a significant predictor of CD diagnosis, given that increasing fiber may lead to worsening gastrointestinal symptoms in a patient with undiagnosed CD. This goes along with analysis of disease location showed the strongest effect of fiber intake with any ileal disease compared to any colonic disease. Logically, one would think that patients with ileal disease would be more symptomatically sensitive to dietary fiber than patients with colonic disease.

Concerning us most is the notion inferred from the research manuscript and explicitly stated in the accompanying editorial "advocating for a high-fiber diet" to reduce the incidence of CD. High-fiber diets are to be avoided in patients with CD, specifically ileal disease, where dietary intake of items high in fiber can lead to bowel obstructions. It is highly likely that the nurses in the study who were silently slowly developing their Crohn's strictures were unconsciously (or purposefully) decreasing fiber intake owing to symptoms that resulted when eating these foods. This would also explain why the same association was not seen in ulcerative colitis; these patients typically do not form strictures. Misunderstanding the potential benefits of high fiber intake can be disastrous for patients with stricturing CD.

We readily agree with the conclusion that further studies are warranted to explore how dietary fiber may modulate inflammation seen in CD. However, we caution against advocating high fiber intake in patients who are at risk for, or already have, suspected or diagnosed CD.

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Conflicts of interest

The authors disclose no conflicts.

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Dietary Fiber and Risk of Inflammatory Bowel Disease: Fact or Hype?

Dear Sir:

In our modern society, it has become a dogma that a diet poor in fruits and vegetables and high in fat and carbohydrates is the culprit behind many diseases, including inflammatory bowel disease, despite the relatively weak evidence.¹ Ananthakrishnan et al in their study also enshrine this dogma in a prospective study on the long-term intake of dietary fiber in a large group of highly educated white females followed over 26 years.² The study raises a number of questions that have been partly addressed in the accompanying editorial.