Celiac Disease and Inflammatory Bowel Disease: Co-Occurrence Increases Pancolitis

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Patients with UC who also have celiac disease may be at higher risk for pancolitis as opposed to more limited forms of inflammatory bowel disease.

Patients with ulcerative colitis (UC) who also have celiac disease may be at higher risk for pancolitis as opposed to more limited forms of inflammatory bowel disease (IBD), according to a Harvard study.

Other than small case series studies and case reports, this study is the first to examine the co-occurrence of celiac disease and IBD.

This is a retrospective, case-controlled study of only 51 patients who received a diagnosis of both IBD and celiac disease between 1996 and 2012: 22 patients had UC, 28 had Crohn disease (CD), and 1 had indeterminate colitis.

The investigators sought to determine whether IBD with coexisting celiac disease represents a subgroup of patients at higher risk for adverse outcomes.

Short answer: In the UC cohort only, coexisting celiac disease increased the likelihood of pancolitis as opposed to more limited colonic inflammation.

Potential cases and controls were identified through electronic data query of the Partners Healthcare Research Practice Data Registry (RPDR), using ICD-9 billing codes to identify variants of IBD coexisting with celiac disease. Because the RPDR also contains laboratory results, the investigators were able to identify possible patients with celiac disease by abnormal serologies in addition to ICD-9 coding.

Potential cases were confirmed by manual chart review of electronic medical records using standard clinical, radiographic, endoscopic, and histological criteria. Two randomly selected controls were identified for each patient, drawing from a set of patients with IBD who did not meet criteria for celiac disease and were matched on IBD type (CD, UC, or indeterminate colitis).

Primary end points for comparison between celiac-IBD cases and non-celiac controls were disease phenotype for IBD (extent and behavior) and natural history (surgery or hospital utilization). Age at IBD diagnosis and sex distribution were similar in patients and controls, but the mean duration of disease was slightly shorter in the celiac-IBD group. There was a higher proportion of other autoimmune diseases among the celiac-IBD group (23.5%) compared with the non-celiac controls (12.8%; \( P = .09 \)).

Pancolitis was more common in celiac-UC patients compared with non-celiac UC controls (63.2% vs 35.9%; odds ratio, 3.90; 95% CI, 1.05 - 10.39).

For CD, the study did not demonstrate differences in disease behavior between the two groups. Having celiac disease did not make pancolitis or other conditions more likely to occur in that group.

One interesting difference: Patients in the celiac-IBD group were significantly less likely to be ever-smokers than non-celiac IBD controls (26.7% vs 45.1%; 95% CI, 0.21 - 0.95).

There was a trend toward increased use of immunomodulators among celiac-UC patients compared with non-celiac UC controls (45.5% vs 22.7%; 95% CI, 0.95 - 8.48).
There was no difference in IBD-related hospitalizations or surgeries between cases and controls.

Of note, patients with a diagnosis of IBD were at relatively low risk for coexisting celiac disease (1.04% - 1.27% prevalence for celiac), but the converse was not true—having celiac disease did predispose for IBD (3.2% - 4.0% prevalence for IBD). If the finding is borne out in larger studies, the authors suggest that given the prevalence of coexistence, screening for underlying IBD in patients with celiac disease may be worthwhile.

The curious finding that patients with celiac-IBD were less likely to have been ever-smokers than controls jibes with other studies that showed similar effects. Is there a protective role for cigarette smoking?

Although this study suggests that patients with UC who also have celiac disease may be at higher risk for pancolitis as opposed to more limited forms of IBD, its small size and retrospective design point to the need for larger prospective studies. Many variables were collected, and only a small fraction of them came back with significant associations—these may have been detected by chance alone (the possibility of a type I error may be large).


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