

Supplementary Data 1

Measurement of anti-*Saccharomyces cerevisiae* antibodies (ASCA) and perinuclear anti-neutrophil cytoplasmic antibodies (pANCA).

ASCA immunoglobulin (Ig) A and IgG levels were measured using enzyme-linked immunosorbent assay (ELISA). The results were categorized as negative (0.0–20.0 units) equivocal (20.1–24.9 units), or positive (≥ 25 units). We classified negative and equivocal results as negative, considering only unequivocally positive results as positive.

Using fluorometric enzyme immunoassays, pANCA was tested by measuring the anti-proteinase 3 (anti-PR3) and anti-myeloperoxidase (anti-MPO) levels. The anti-PR3 results were categorized as negative (2.0 IU/mL), equivocal (2.0–3.0 IU/mL), or positive (>3.0 IU/mL). The anti-MPO results were also categorized as negative (<3.5 IU/mL), equivocal (3.5–5.0 IU/mL), or positive (>5.0 IU/mL). We classified both negative and equivocal results as negative and considered only positive results to be positive.

Supplementary Data 2

Imaging studies.

Only patients who underwent esophagogastroduodenoscopy (EGD) scoping of the esophagus, stomach, and duodenum; ileocolonic fiberoscopy (CFS) scoping of the terminal ileum and colon; and had documented skin tag description were considered eligible for study inclusion. Two endoscopists reevaluated each endoscopic image. The small bowel was evaluated using computed tomography (CT), magnetic resonance enterography, pelvic magnetic resonance imaging (MRI), or string capsule endoscopy. The perianal fistulas were examined using CT or MRI.

Supplementary Data 3

Pathologic criteria [1–5].

Pathologic criteria for inflammation

Inflammation was graded on a scale of 0 (normal), 1 (mild), 2 (moderate), and 3 (severe) based on the degree of acute and chronic inflammatory cell infiltration in the lamina propria, crypts, and epithelial surfaces, with or without crypt abscesses, crypt distortion, erosion, and ulceration. Microscopic inflammation was defined as the presence of any pathological inflammation in the normal-appearing mucosa observed on endoscopy.

Pathologic criteria for non-caseating granuloma

Noncaseating granulomas anywhere in the gastrointestinal (GI) tract, distinct from ruptured crypts were defined as small aggregations of epithelioid histiocytes surrounded by a rim of lymphoid cells. This differentiation was performed to distinguish between noncaseating granulomas and cryptolytic granulomas caused by cryptic injury.

Pathologic criteria for chronic ileitis

Chronic ileitis was characterized by increased infiltration of lymphoid or plasma cells in the lamina propria, crypts, or surface epithelium of the ileum, whereas chronic active ileitis was defined as acute and chronic inflammatory infiltration in the lamina propria, crypts, or surface epithelium, with or without abscesses, erosion, and ulceration.

Pathologic criteria for focal chronic duodenitis

Focal chronic duodenitis was defined as chronic and/or acute inflammatory infiltration of the lamina propria, crypts, or surface epithelium of the duodenum.

Pathologic criteria for focal active colitis

Focal active colitis was characterized by either a single focus or multiple discrete foci of crypt injury due to neutrophilic infiltration without crypt distortion. This ranged from a single crypt abscess or a single focus of cryptitis to multiple discrete foci of cryptitis or crypt abscesses within a series of colorectal biopsies.

Pathologic criteria for focally enhanced gastritis

Focally enhanced gastritis was defined as the aggregation of lymphocytes and macrophages in the focal pit of an inflamed gland,

leading to epithelial injury. The gland often contained plasma cells, eosinophils, and/or neutrophils in varying proportions, with intact background mucosa.

Pathologic criteria for celiac disease

Celiac disease was suspected when the number of intraepithelial lymphocytes on the tips of normally structured villi was >6 per 20 epithelial cells. Additionally, abnormal findings of villous architecture, such as villous atrophy and blunting along with crypt hyperplasia containing more than 40 intraepithelial lymphocytes per 100 epithelial cells were observed.