

of these inflammatory mediators through inhibition of transcription factors such as NF- κ B that regulate their expression.

PATHOLOGY

ULCERATIVE COLITIS: MACROSCOPIC FEATURES

UC is a mucosal disease that usually involves the rectum and extends proximally to involve all or part of the colon. About 40–50% of patients have disease limited to the rectum and rectosigmoid, 30–40% have disease extending beyond the sigmoid but not involving the whole colon, and 20% have a total colitis. Proximal spread occurs in continuity without areas of uninvolved mucosa. When the whole colon is involved, the inflammation extends 2–3 cm into the terminal ileum in 10–20% of patients. The endoscopic changes of *backwash ileitis* are superficial and mild and are of little clinical significance. Although variations in macroscopic activity may suggest skip areas, biopsies from normal-appearing mucosa are usually abnormal. Thus, it is important to obtain multiple biopsies from apparently uninvolved mucosa, whether proximal or distal, during endoscopy. One caveat is that effective medical therapy can change the appearance of the mucosa such that either skip areas or the entire colon can be microscopically normal.

With mild inflammation, the mucosa is erythematous and has a fine granular surface that resembles sandpaper. In more severe disease, the mucosa is hemorrhagic, edematous, and ulcerated (Fig. 351-3). In long-standing disease, inflammatory polyps (pseudopolyps) may be present as a result of epithelial regeneration. The mucosa may appear normal in remission, but in patients with many years of disease it appears atrophic and featureless, and the entire colon becomes narrowed and shortened. Patients with fulminant disease can develop a toxic colitis or megacolon where the bowel wall thins and the mucosa is severely ulcerated; this may lead to perforation.

ULCERATIVE COLITIS: MICROSCOPIC FEATURES

Histologic findings correlate well with the endoscopic appearance and clinical course of UC. The process is limited to the mucosa and superficial submucosa, with deeper layers unaffected except in fulminant disease. In UC, two major histologic features suggest chronicity and help distinguish it from infectious or acute self-limited colitis. First, the crypt architecture of the colon is distorted; crypts may be bifid and reduced in number, often with a gap between the crypt bases and the muscularis mucosae. Second, some patients have basal plasma cells and multiple basal lymphoid aggregates. Mucosal vascular congestion, with edema and focal hemorrhage, and an inflammatory cell infiltrate of neutrophils, lymphocytes, plasma cells, and macrophages may be present.

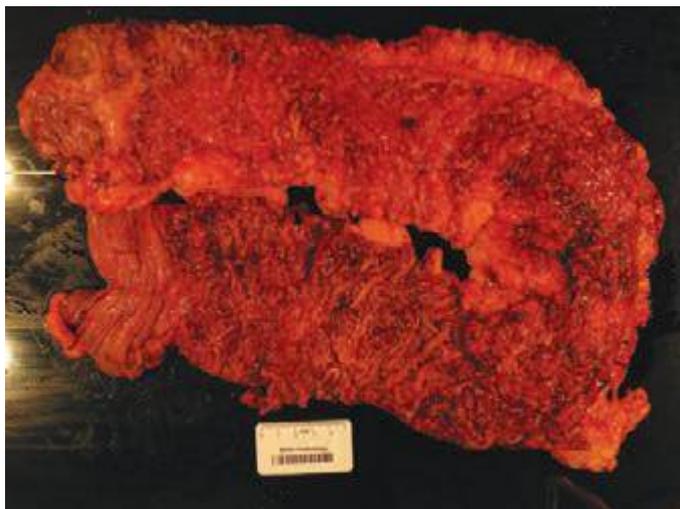


FIGURE 351-3 Ulcerative colitis. Diffuse (nonsegmental) mucosal disease, with broad areas of ulceration. The bowel wall is not thickened, and there is no cobblestoning. (Courtesy of Dr. R. Odze, Division of Gastrointestinal Pathology, Department of Pathology, Brigham and Women's Hospital, Boston, Massachusetts; with permission.)

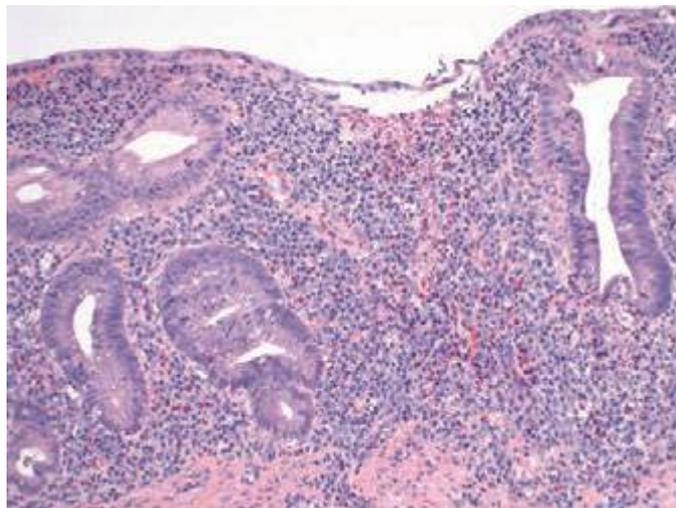


FIGURE 351-4 Medium-power view of colonic mucosa in ulcerative colitis showing diffuse mixed inflammation, basal lymphoplasmacytosis, crypt atrophy and irregularity, and superficial erosion. These features are typical of chronic active ulcerative colitis. (Courtesy of Dr. R. Odze, Division of Gastrointestinal Pathology, Department of Pathology, Brigham and Women's Hospital, Boston, Massachusetts; with permission.)

The neutrophils invade the epithelium, usually in the crypts, giving rise to cryptitis and, ultimately, to crypt abscesses (Fig. 351-4). Ileal changes in patients with backwash ileitis include villous atrophy and crypt regeneration with increased inflammation, increased neutrophil and mononuclear inflammation in the lamina propria, and patchy cryptitis and crypt abscesses.

CROHN'S DISEASE: MACROSCOPIC FEATURES

CD can affect any part of the gastrointestinal (GI) tract from the mouth to the anus. Some 30–40% of patients have small bowel disease alone, 40–55% have disease involving both the small and large intestines, and 15–25% have colitis alone. In the 75% of patients with small intestinal disease, the terminal ileum is involved in 90%. Unlike UC, which almost always involves the rectum, the rectum is often spared in CD. CD is segmental with skip areas in the midst of diseased intestine (Fig. 351-5). Perirectal fistulas, fissures, abscesses, and anal stenosis are present in one-third of patients with CD, particularly those with



FIGURE 351-5 Crohn's disease of the colon showing thickening of the wall, with stenosis, linear serpiginous ulcers and cobblestoning of the mucosa. (Courtesy of Dr. R. Odze, Division of Gastrointestinal Pathology, Department of Pathology, Brigham and Women's Hospital, Boston, Massachusetts; with permission.)