New Onset Inflammatory Bowel Disease due to Anti-IL-17 Therapy

Sartajdeep Kahlon, MD; Bao Sean Nguyen, MD; Eric J. Mao, MD; Anastasia Waechter, MD
Department of Internal Medicine, Division of Gastroenterology and Hepatology, UC Davis Medical Center

Introduction

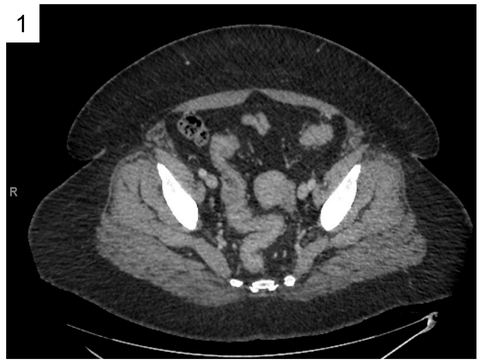
Both psoriasis and inflammatory bowel disease (IBD) are driven by inappropriate immune responses. Antibody therapy to the pro-inflammatory cytokine interlukin-17 (IL-17) has been associated with de-novo IBD. We describe two cases of new onset IBD in patients started on the anti-IL-17 antibodies ixekizumab and secukinumab, both with unique clinical courses.

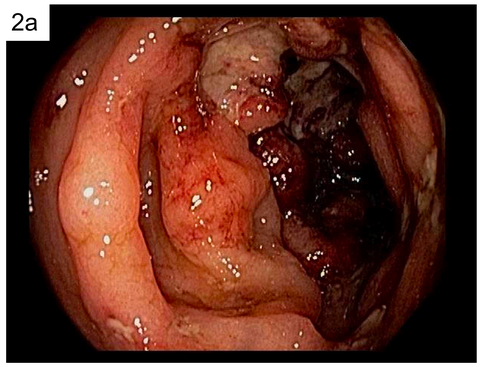
Clinical Presentations

Patient 1: A 47-year-old woman with hypertension, type 2 diabetes mellitus, and psoriasis presented with 2 weeks of abdominal cramping and rectal bleeding. She had been stable on brodalumab but switched to ixekizumab two months prior to presentation. She denied a family history of IBD. Her labs were notable for mild leukocytosis, thrombocytosis, and elevated CRP. CT showed evidence of descending colitis (Figure 1). Colonoscopy revealed multifocal colitis, with biopsies suggesting IBD or drug-induced colitis (Figure 2a and 2b). She was started on ustekinumab which resolved her GI symptoms. Repeat colonoscopy one year later confirmed endoscopic and histologic remission.

Patient 2: A 36-year-old woman with pre-diabetes and psoriasis presented with watery diarrhea, abdominal cramping and stool discharge per vagina one week after switching from adalimumab to secukinumab. She reported a family history of Crohn's disease in her mother. Her labs were notable for leukocytosis, thrombocytosis, and elevated CRP. CT revealed left sided colitis and MR showed a rectovaginal fistula (Figure 3 and 4). Colonoscopy revealed ileo-pancolitis and biopsies were consistent with IBD or drug-induced colitis (Figure 5). Secukinumab was discontinued. One week after discharge, the patient reported cessation of stool discharge per vagina and improvement in diarrhea and abdominal pain.

Figures





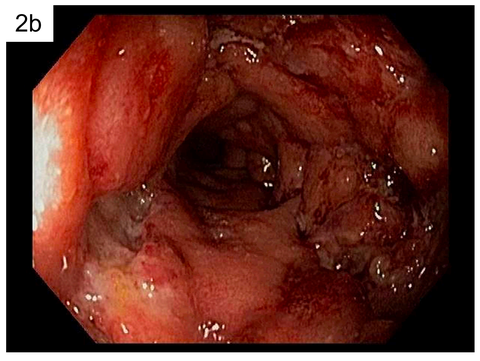
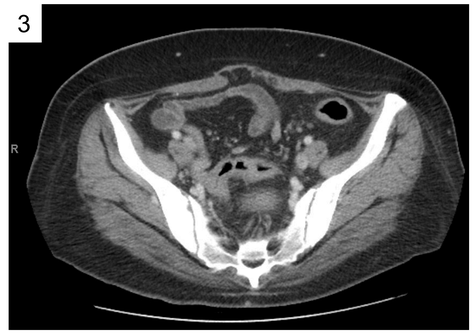
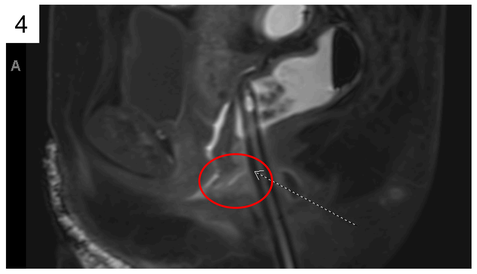


Figure 1: CT abdomen/pelvis with descending colitis
Figure 2a, 2b: Long-segment (30 cm) ulcerated lesion in the left colon





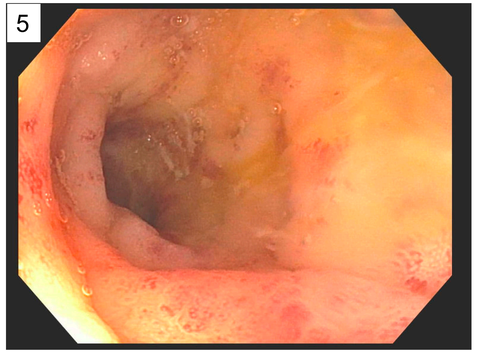


Figure 3: CT abdomen/pelvis with descending colitis
Figure 4: MRI of abdomen with evidence of rectovaginal fistula
Figure 5: Colonoscopy with severe pan-colitis

Discussion

- These case reports add to the literature that describes a relationship between IL-17 antagonism and IBD.
- IL-17 dysregulation is implicated in the development of both Crohn's disease (CD) and ulcerative colitis (UC), most likely through T-cell mediated damage of the gut lining[1,2].

- Patient 1 is unique in that she was exposed to two different IL-17 antibodies prior to her diagnosis of IBD. This is a rare case of ustekinumab rescue of ixekizumab-induced IBD.

- Patient 2 is the only case of IL-17-induced IBD with a rectovaginal fistula described in the literature.

- In phase 3 trials of ixekizumab for psoriasis that involved over 3700 patients, 11 cases of IBD occurred during ixekizumab treatment and were reported as adverse events[3].
- In a study of secukinumab therapy for psoriatic arthritis, 1 case of Crohn's disease and 1 case of ulcerative colitis were also reported in the treatment group[4].

- Providers should consider avoiding anti-IL-17 therapies for patients with a personal history of IBD and should monitor patients on these therapies closely for the development of IBD.

References

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