

# Ustekinumab for Successful Treatment of Refractory Esophageal Crohn's Disease

Jodie A. Barkin, MD, and Amar R. Deshpande, MD

*Department of Medicine, Division of Gastroenterology, University of Miami, Leonard M. Miller School of Medicine, Miami, FL*

---

## Abstract

Esophageal involvement in Crohn's disease is rare. We present a case of refractory esophageal Crohn's disease that responded to ustekinumab, which has shown promise in the treatment of refractory, typically intestinal Crohn's disease. There are no prior reports on the successful use of ustekinumab in esophageal Crohn's disease, but should be considered as a possible management strategy in patients with this condition.

---

## Introduction

Esophageal involvement in Crohn's disease (CD) is rare; a subset of this population is refractory to conventional CD therapies. Ustekinumab is a human monoclonal antibody against interleukin-12 and interleukin-23 that has primarily been used in the treatment of psoriasis. Ustekinumab has recently been used as an emerging biologic agent in the management of patients with CD.<sup>1</sup>

## Case Report

A 23-year-old man presented with odynophagia and oral ulcers. He had a 15-year history of aggressive, primarily stricturing colonic and perianal CD, status post subtotal colectomy with end-ileostomy. Prior to colectomy, he failed conventional therapies including mesalamines, steroids, thiopurines, methotrexate, and anti-TNF agents; he also failed to respond to unconventional therapies including thalidomide, helminth therapy with *Trichuris trichiura*, granulocyte-macrophage colony-stimulating factor, and stem cells. Post-operatively he did generally well on certolizumab pegol for a few years, with several episodes of peri-stomal fistulae complicated by stomal pyoderma gangrenosum and mild ileitis with distal ileal structuring. He required stomal revision before the odynophagia and oral ulcers developed.

Upper endoscopy revealed oral aphthae and multiple esophageal ulcers, with biopsies showing ulceration and inflammation, which were negative for herpes simplex virus and cytomegalovirus (Figure 1). The patient was empirically treated for herpes simplex virus with valacyclovir and prednisone; his symptoms rapidly improved but recurred with poor oral intake after tapering off prednisone, leading to a 13-kg weight loss. He continued to have intermittent odynophagia and oral ulcers despite high-dose prednisone, swallowed fluticasone, aggressive acid suppression, and certolizumab pegol. He declined natalizumab given John Cunningham virus positivity, and declined thalidomide as it had previously led to peripheral neuropathy. Vedolizumab was not yet approved at that time, and there were no available studies for which he qualified. He was therefore switched from certolizumab pegol to ustekinumab at 90 mg subcutaneously every 8 weeks; over the next several months, he achieved prolonged symptom remission off all steroids and acid suppression. His peri-stomal fistulae and ileitis were also well-controlled with ustekinumab. Repeat upper endoscopy revealed complete resolution of oral and esophageal ulceration (Figure 2).

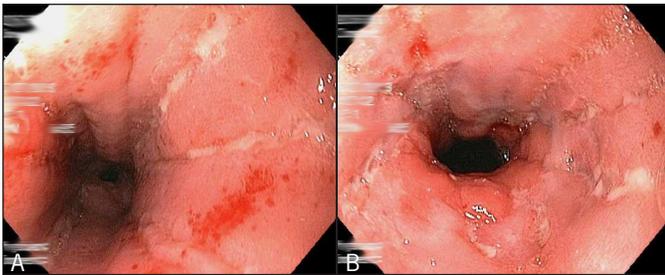
---

*ACG Case Rep J* 2016;3(2):107-108. doi:10.14309/crj.2016.15. Published online: January 20, 2016.

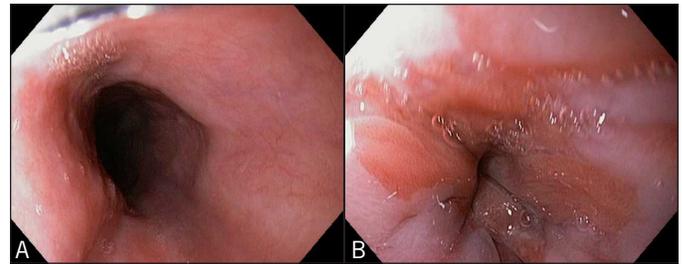
**Correspondence:** Jodie A. Barkin, University of Miami, Leonard M. Miller School of Medicine, Department of Medicine, Division of Gastroenterology, 1120 NW 14th St, Clinical Research Building, Suite 1116 (D-49) Miami, FL 33136 (jabarkin@med.miami.edu).



**Copyright:** © 2016 Barkin et al. This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0>.



**Figure 1.** High-definition white light endoscopy showing cratered and linear esophageal ulcerations consistent with esophageal Crohn's disease prior to treatment with ustekinumab.



**Figure 2.** High-definition white light endoscopy demonstrating endoscopic remission of esophageal Crohn's disease after treatment with ustekinumab.

## Discussion

Ustekinumab has shown promise in treatment of refractory, typically intestinal CD.<sup>1-2</sup> The efficacy of ustekinumab as first-line therapy for intestinal CD has been limited.<sup>3-4</sup> To our knowledge, there are no prior reports on the successful use of ustekinumab in esophageal CD. Thalidomide has previously been successfully used in the treatment of primarily refractory intestinal CD, and has also been reported for use in refractory esophageal CD; however, its broad side-effect profile, including peripheral neuropathy, as in our patient, and teratogenicity, limit its use.<sup>5</sup> Most new therapies have focused on ileocolonic disease, including the anti-integrins. Perhaps interruption of interleukin-12 and interleukin-23 is a mechanism for treatment of esophageal CD. Ustekinumab should be considered as a possible management strategy in patients with esophageal CD.

## Disclosures

Author contributions: Both authors wrote and edited the manuscript. JA Barkin conducted the background research. AR Deshpande is the article guarantor.

Financial disclosure: None to report.

Informed consent was obtained for this case report.

Previous Presentation: This case report was presented as a poster at the 2015 ACG Annual Scientific Meeting; October 17-22, 2015; Philadelphia, Pennsylvania.

Received August 25, 2015; Accepted December 13, 2015

## References

1. Sandborn WJ, Feagan BG, Fedorak RN, et al; Ustekinumab Crohn's Disease Study Group. A randomized trial of ustekinumab, a human interleukin-12/23 monoclonal antibody, in patients with moderate-to-severe Crohn's disease. *Gastroenterology*. 2008;135(4):1130-41.
2. Sandborn WJ, Gasink C, Gao LL, et al; CERTIFI Study Group. Ustekinumab induction and maintenance therapy in Crohn's disease. *N Engl J Med*. 2012;367(16):1519-28.
3. Singh S, Garg SK, Pardi DS, et al. Comparative efficacy of biologic therapy in biologic-naïve patients with Crohn disease: A systematic review and network meta-analysis. *Mayo Clin Proc*. 2014;89(12):1621-35.
4. Khanna R, Preiss JC, MacDonald JK, et al. Anti-IL-12/23p40 antibodies for induction of remission in Crohn's disease. *Cochrane Database Syst Rev*. 2015;5:CD007572.
5. Barkin JA, Schonfeld WB, Deshpande AR. Successful use of thalidomide for refractory esophageal Crohn's disease. *Am J Gastroenterol*. 2013;108(5):855-7.

## Publish your work in ACG Case Reports Journal

ACG Case Reports Journal is a peer-reviewed, open-access publication that provides GI fellows, private practice clinicians, and other members of the health care team an opportunity to share interesting case reports with their peers and with leaders in the field. Visit <http://acgcasereports.gi.org> for submission guidelines. Submit your manuscript online at <http://mc.manuscriptcentral.com/acgcr>.