

# Recurrent Obstructive Giant Inflammatory Polyposis of the Colon

Gaurav Syal, MD<sup>1</sup> and Vikram Budhraja, MD<sup>2</sup>

<sup>1</sup>Division of Gastroenterology and Hepatology, Department of Internal Medicine, University of Arkansas for Medical Sciences, Little Rock, AR

<sup>2</sup>Division of Gastroenterology and Hepatology, Baystate Medical Center, Springfield, MA

## ABSTRACT

Inflammatory polyps are relatively common in patients with inflammatory bowel disease. The term giant inflammatory polyposis is used to describe inflammatory polyps greater than 1.5 cm in any dimension. Their clinical presentation can be varied, ranging from asymptomatic, with incidental detection on radiological or endoscopic testing, to symptomatic, with rectal bleeding and colonic obstruction. Although giant inflammatory polyposis is a rare finding, it is of clinical importance, since it is easily mistaken for colon cancer, with patients sometimes undergoing radical surgeries. We describe an unusual case of giant inflammatory polyposis causing recurrent symptomatic obstruction despite multiple segmental colectomies in a patient with indeterminate colitis. This is the first such reported case in English literature to the best of our knowledge.

## INTRODUCTION

Inflammatory polyps occur in 10%–20% of patients with inflammatory bowel disease (IBD).<sup>1,2</sup> Such polyps can rarely increase in size to greater than 1.5 cm in height or diameter, and are then called giant inflammatory polyps (GIPs).<sup>3</sup> Since they can be confused with colorectal cancer or dysplasia-associated lesion or mass due to their irregular, mass-like appearance, histopathological examination is essential for differentiation. Despite the benign nature of GIP, many patients require surgical resection for bowel obstruction.

## CASE REPORT

A 58-year-old white man underwent a colonoscopy in June 2002 for rectal bleeding, constipation, and left lower quadrant abdominal pain. Medication history did not reveal nonsteroidal antiinflammatory drug use. Colonoscopy showed normal rectum and a large mass almost completely obstructing the bowel lumen at 28 cm from anal verge precluding further advancement of the endoscope. Biopsies from the mass showed mucosal ulceration, crypt abscesses, and distortion of gland architecture, features suggestive of acute on chronic IBD. The patient underwent sigmoid colectomy (18-cm segment resected) with primary end-to-end anastomosis a few days later. The surgical specimen grossly showed colonic mucosa almost entirely covered with multiple branching villiform polyps ranging from 2 to 2.5 cm in size. Histopathological exam showed giant inflammatory polyposis on the background of chronic IBD without dysplasia or cancer. Surgical margins were free from disease activity.

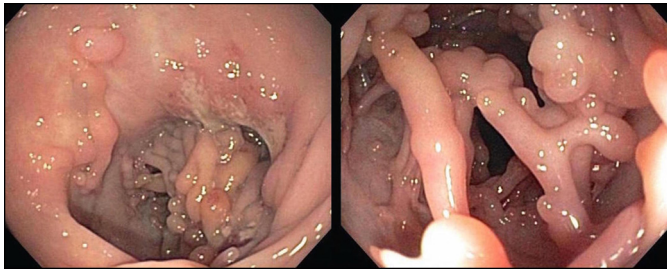
The patient initially did well postoperatively but had recurrence of obstructive symptoms 3 months later. Repeat colonoscopy showed a recurrent obstructive mass in the sigmoid colon. Biopsies were again suggestive of inflammatory polyps on the background of chronic IBD. After failing a 4-week therapeutic trial with prednisone 50 mg daily, the patient underwent a recurrent sigmoid colectomy (12-cm segment resected with mass occupying around 80% of the length of resected segment) in January 2003. Surgical pathology again showed inflammatory polyposis associated with chronic IBD without dysplasia. Medical treatment with mesalamine 2.4 g daily was started postoperatively, but the patient developed recurrent rectal bleeding and abdominal pain 3 months after surgery.

ACG Case Rep J 2016;3(4):e89. doi:10.14309/crj.2016.62. Published online: July 27, 2016.

Correspondence: Gaurav Syal, 4301 W Markham Street, Slot 567, Little Rock, AR 72205 (gauravsyal@gmail.com).



Copyright: © 2016 Syal 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>.

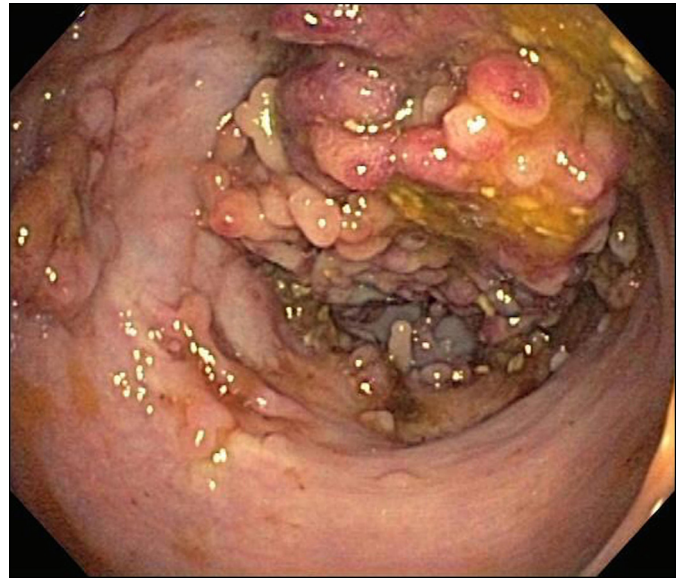


**Figure 1.** Endoscopic images of nonobstructive sigmoid giant inflammatory polyposis (in 2010).

Repeat colonoscopy in May 2003 showed a recurrent, partially obstructing mass in the sigmoid colon extending proximally from the surgical anastomosis at 20–25 cm from anal verge (5 cm in length); the rest of the colon appeared normal. Biopsies of the mass showed acute on chronic inflammation with pseudopolyp formation. Biopsies from the rest of the colon also showed acute on chronic inflammation. Azathioprine 100 mg daily and infliximab 5 mg/kg per dose were then added, which resulted in gradual improvement in his symptoms.

A follow-up flexible sigmoidoscopy performed in September 2003 showed persistent circumferential nonobstructing mass in the sigmoid colon extending from 20 to 25 cm from anal verge, although significantly improved as compared to previous endoscopy. Infliximab was stopped after 6 months at patient's request due to risk of infections; azathioprine and mesalamine were continued. He continued to have intermittent mild lower abdominal pain without diarrhea, constipation, or hematochezia for the next few years, despite increasing the doses of azathioprine to 150 mg in addition to mesalamine 4.8 g daily.

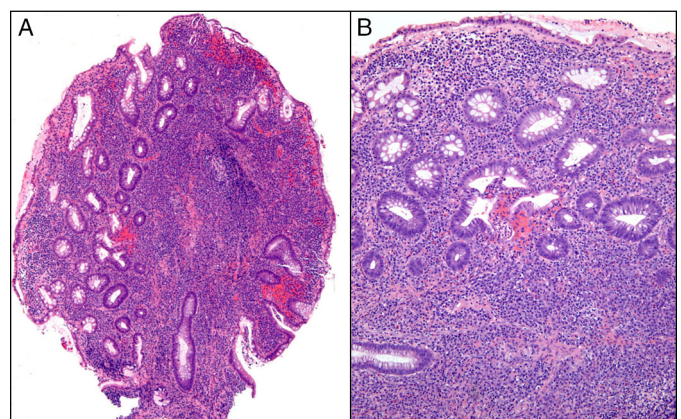
Colonoscopy in 2010 for colorectal cancer screening that showed persistent nonobstructive sigmoid GIP extending from 20 to 33 cm from anal verge and normal rest of the colon (Figure 1). In December 2012, he reported having intermittent rectal bleeding, constipation, and abdominal pain. He had stopped taking both azathioprine and mesalamine a few months prior to that. Colonoscopy showed a large polypoid sigmoid mass extending from 20 to 35 cm from anal verge causing near-complete luminal obstruction (Figure 2). The lesion was traversed with an ultrathin endoscope, and biopsies were taken from the normal appearing transverse and descending colon. Sigmoid mass biopsies showed inflammatory polyps in the background of basal lymphoplasmacytosis and crypt architectural distortion consistent with chronic active colitis (Figure 3). Biopsies from the transverse and descending colon showed features of quiescent IBD (Figure 4). The patient, once again, refused biologic therapy and surgical intervention. He was treated with a short course of prednisone 40 mg daily and mesalamine enemas in addition to resumption of oral azathioprine and mesalamine therapy. The



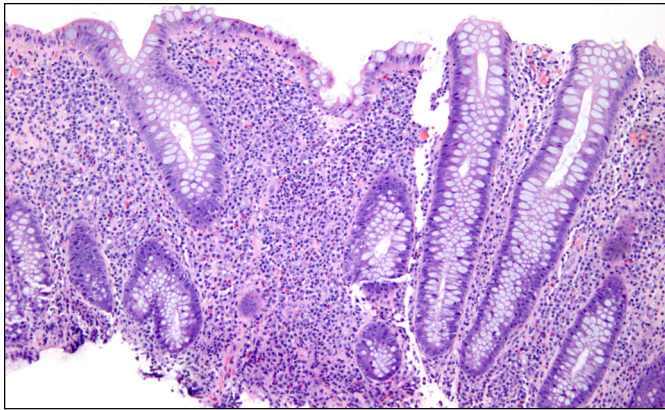
**Figure 2.** Endoscopic image of sigmoid mass causing near total obstruction of colonic lumen (in 2012).

patient was lost to follow-up after that and stopped taking all medications for IBD as his symptoms resolved.

He reestablished care in outpatient gastroenterology clinic in September 2015 with complaints of recurrent intermittent lower abdominal pain, blood per rectum, and weight loss of around 10 pounds over a period of 3–4 months. He had a colonoscopy in October 2015, which showed innumerable nonobstructive GIPs extending from 20 to 35 cm from anal verge. After much counseling about the risk of disease progression and recurrent surgeries, the patient was started medical therapy in October 2015 with azathioprine 100 mg daily and vedolizumab 300 mg intravenously every 8 weeks after 3 induction doses at 0, 2, and 6 weeks. His last follow-up was in



**Figure 3.** Hematoxylin and eosin staining of sigmoid mass biopsy showing inflammatory polyp with crypt abscess, basal lymphoplasmacytosis and crypt architectural distortion in 10x resolution (A) and 40x resolution (B).



**Figure 4.** Hematoxylin and eosin staining of transverse colon biopsy showing increased mucosal cellularity with crypt architectural distortion without cryptitis or crypt abscesses.

early December 2015 when his symptoms had significantly improved and he remained compliant with medical therapy.

## DISCUSSION

Inflammatory polyps, or pseudopolyps, are common in IBD and can also occur in severe infectious colitis<sup>4</sup> and ischemic colitis.<sup>5</sup> Inflammatory polyps greater than 1.5 cm in diameter are called GIP,<sup>3</sup> Although inflammatory polyps occur twice as frequently in ulcerative colitis as in colonic Crohn's disease,<sup>2,6</sup> GIPs have been reported to occur with equal frequency in Crohn's disease and ulcerative colitis.<sup>7</sup> They can exist as solitary giant polyps, which constitute a majority of reported cases, or as diffuse involvement of a large area of colon.<sup>8</sup> The finding of GIP does not correlate with the severity of the underlying IBD, because they can occur in both active and quiescent phases of the disease.<sup>7</sup> They also tend to appear early in the course of IBD with many patients, like ours, presenting with giant pseudopolyps as the first manifestation of the disease.<sup>9</sup>

Inflammatory polyps are thought to originate as a result of mucosal inflammation with ulceration and tissue regeneration. They represent islands of inflamed edematous mucosa with granulation tissue in the midst of mucosal ulceration. Repeated peristalsis and mucosal traction related to the fecal stream may lead to elongation of these islands creating a polypoid appearance.<sup>10</sup>

Giant inflammatory polyps can be asymptomatic but most commonly present with abdominal pain, diarrhea, rectal bleeding, or palpable abdominal mass.<sup>7</sup> Other reported manifestations include partial or complete obstruction, protein-losing enteropathy,<sup>11</sup> anemia, and intussusception.<sup>12</sup> Transverse colon is the most frequently affected site, followed by descending colon, sigmoid colon, ascending colon, and cecum.<sup>7</sup> Radiologically and endoscopically, they can be confused with colon cancer, especially in patients without a

known diagnosis of IBD, or with dysplasia-associated lesion or mass in patients with known IBD. Endoscopic biopsies with careful histopathological examination are essential for correct diagnosis and to rule out foci of dysplasia. Due to reepithelialization of the surface of inflammatory polyps over time, superficial biopsies may show normal colonic mucosa. Hence, complete removal of the isolated giant pseudopolyps should be performed whenever possible.<sup>7</sup>

The patients with asymptomatic GIP or those associated with symptoms of primary IBD should be treated medically.<sup>13</sup> In cases with complications of GIP, like colonic obstruction or intussusception, or when complete visualization of the lesion cannot be achieved to ensure representative biopsies, surgical resection is usually necessary. Recurrence after surgical resection has never been reported in the literature. However, our case clearly highlights the potential for postsurgical recurrence of GIP in the absence of effective medical therapy, even with uninvolved surgical margins. Endoscopic therapy with snare polypectomy has been successfully reported in some cases and may be effective in relieving symptoms in selected cases of isolated GIPs.<sup>14</sup> Giant inflammatory polyp is generally regarded as a benign lesion. Only 1 case of occult adenocarcinoma in GIP associated with ulcerative colitis has been reported in the literature, which was associated with multiple foci of dysplasia in other areas of pseudopolyp.<sup>15</sup> Hence, thorough pathological examination of the resected specimen is prudent to exclude dysplasia or adenocarcinoma in situ.

Giant inflammatory polyp is a rare complication of IBD, which should be considered in the differential diagnosis of incidentally detected colonic mass in patients with IBD. Although surgical resection is an effective treatment for GIP in a majority of patients, our case highlights the risk of recurrence at the anastomotic site. This should be thoroughly considered and discussed with the patient prior to making a decision to perform surgical resection, particularly in cases where surgery can be avoided by using aggressive medical therapy.

## DISCLOSURES

Author contributions: G. Syal wrote the manuscript, edited the images, and is the article guarantor. V. Budhraj obtained images, reviewed and edited the manuscript.

Financial disclosure: None to report.

Informed consent was obtained for this case report.

Received October 11, 2015; Accepted January 4, 2016

## REFERENCES

1. De Dombal FT, Watts JM, Watkinson G, Goligher JC. Local complications of ulcerative colitis: Stricture, pseudopolyposis, and carcinoma of colon and rectum. *Br Med J*. 1966;1(5501):1442-7.
2. Jalan KN, Walker RJ, Sircus W, et al. Pseudopolyposis in ulcerative colitis. *Lancet*. 1969;2(7620):555-9.
3. Hinrichs HR, Goldman H. Localized giant pseudopolyps of the colon. *JAMA*. 1968;205(4):248-9.
4. Berkowitz D, Bernstein LH. Colonic pseudopolyps in association with amebic colitis. *Gastroenterology*. 1975;68(4 pt 1):786-9.
5. Levine DS, Surawicz CM, Spencer GD, et al. Inflammatory polyposis two years after ischemic colon injury. *Dig Dis Sci*. 1986;31(10):1159-67.
6. Fitterer JD, Cromwell LG, Sims JE. Colonic obstruction by giant pseudopolyposis. *Gastroenterology*. 1977;72(1):153-6.
7. Maggs JLM, Browning LC, Warren BF, Travis SPL. Obstructing giant post-inflammatory polyposis in ulcerative colitis: Case report and review of the literature. *J Crohns Colitis*. 2008;2(2):170-80.
8. Kovalcik PJ, Szydowski TR. Localized giant pseudopolyposis of the colon in ulcerative colitis. *Dis Colon Rectum*. 1980;23(4):268-70.
9. Ferguson CJ, Balfour TW, Padfield CJH. Localized giant pseudopolyposis of the colon in ulcerative colitis: Report of a case. *Dis Colon Rectum*. 1987;30(10):802-4.
10. Kelly JK, Gabos S. The pathogenesis of inflammatory polyps. *Dis Colon Rectum*. 1987;30(4):251-4.
11. Koga H, Iida M, Aoyagi K, et al. Generalized giant inflammatory polyposis in a patient with ulcerative colitis presenting with protein-losing enteropathy. *Am J Gastroenterol*. 1995;90(5):829-31.
12. Forde KA, Gold RP, Holck S. Giant pseudopolyposis in colitis with colonic intussusception. *Gastroenterology*. 1978;75(6):1142-6.
13. Choi YS, Suh JP, Lee IT, et al. Regression of giant pseudopolyps in inflammatory bowel disease. *J Crohns Colitis*. 2012;6(2):240-3.
14. Ooi BS, Tjandra JJ, Pedersen JS, Bhathal PS. Giant pseudopolyposis in inflammatory bowel disease. *Aust N Z J Surg*. 2000;70(5):389-93.
15. Kusunoki M, Nishigami T, Yanagi H, et al. Occult cancer in localized giant pseudopolyposis. *Am J Gastroenterol*. 1992;87(3):379-81.