Regression of giant pseudopolyps in inflammatory bowel disease

Yong Sung Choi,⁎ Jung Pil Suh, In Taek Lee, Jong Kyu Kim, Suk Hee Lee, Kyung Ran Cho, Hyun Joo Park, Do Sun Kim, Doo Han Lee

Department of Gastroenterology, Daehang Hospital, Seoul, South Korea
Department of Surgery, Daehang Hospital, Seoul, South Korea
Department of Pathology, Daehang Hospital, Seoul, South Korea

Received 3 July 2011; received in revised form 3 August 2011; accepted 11 August 2011

Keywords
Inflammatory bowel disease; Giant pseudopoly; Regression

Abstract
Inflammatory pseudopolyps are formed in the regenerative and healing phases of ulcerated epithelium. Giant pseudopolyposis of the colon (pseudopoly larger than 1.5 cm in size) is a very rare complication of inflammatory bowel disease and it may lead to colonic intussusception or luminal obstruction, but the more important clinical significance is that it can be endoscopically confused with a malignancy, although it is generally regarded as having no malignant potential. It has been reported that giant pseudopolyposis of the colon rarely regresses with medical management alone and they sometimes require surgical or endoscopic resection. This report illustrates 2 unusual cases of giant pseudopolyps associated with Crohn's disease and ulcerative colitis, and these giant pseudopolyps were initially confused with villous adenoma or adenocarcinoma, but they showed regression after adequate medical therapy.

1. Introduction
Inflammatory pseudopolyps result from a regenerative and healing process that leaves inflamed colonic mucosa in a polypoid configuration. They grossly appear as small lesions and they very rarely appear as giant protruding colonic masses larger than 1.5 cm in association with inflammatory bowel disease (IBD), which can be grossly confused with a malignancy. It has been reported that they rarely regress with medical management alone and they sometimes require surgical or endoscopic resection. This report presents 2 cases of Crohn's disease and ulcerative colitis in which giant pseudopolyps mimicked villous adenomas or adenocarcinomas and these lesions regressed during follow-up. We also review the relevant medical literature.

2. Case 1
A 62-year-old man visited a local clinic presenting with a history of chronic bloody diarrhea. After colonoscopic and...
radiologic evaluation, Crohn’s disease was suspected and remitted with systemic corticosteroid therapy. Six months later, he was transferred to our hospital presenting with a 3-month history of recurrent bloody diarrhea, lower abdominal pain and weight loss (5 kg during 3 months). Physical exam revealed mild left lower abdominal pain with normal vital signs. On the general peripheral blood test, the leucocytes were 10,306/μL, the hemoglobin was 10.1 g/dL and the platelets were 521,000/μL. The ESR was 24 mm/h and the CRP was 2.63 mg/L. Simple chest X-rays showed no abnormality. The interferon-γ assay was negative. Colonoscopy revealed scattered aphthoid ulcerations in the ascending and transverse colon. There was a huge hyperemic and multilobulated mass in the sigmoid colon that mimicked villous adenoma and polypoid adenocarcinoma, and the mass was not amenable to endoscopic resection (Fig. 1a). Biopsies on the ulcerations revealed noncaseating granuloma, which was consistent with Crohn’s colitis. Biopsies on the mass revealed finger-like mucosal extension supported by submucosa consisting of a variable mixture of inflammatory tissue, which is histologically consistent with an inflammatory pseudopolyp (Fig. 2). The patient underwent a computed tomography scan and virtual computed tomography colonography, and this all demonstrated a mass suggestive of a large villous tumor. He was placed on prednisone 40 mg/day and there was improvement in his diarrhea. Azathioprine was administered at a starting dose of 25 mg, and then this was increased up to 100 mg for 4 weeks. Follow-up colonoscopy six months later demonstrated regression of the giant pseudopolyp and healing of the background mucosa (Fig. 1b).

3. Case 2

A 63-year-old man who presented with a history of bloody and mucoid diarrhea for three months was diagnosed with ulcerative colitis. An initial colonoscopy revealed continuous, mucopurulent and ulcerative inflammation on the left-sided colon and rectum with a 2 cm-sized hyperemic and villous-surfaced tumor at the recto-sigmoid junction (Fig. 3a). Physical exam revealed nonspecific abnormality and the vital signs were normal. On the general peripheral blood tests, the leucocytes were 8306/μL, the hemoglobin was 13.1 g/dL and the platelets were 521,000/μL. The ESR was 14 mm/h and the CRP was 1.3 mg/L. Multiple biopsies of the mass and distal colon and rectum established the diagnosis of a giant pseudopolyp with underlying active ulcerative colitis (Fig. 4). The patient was treated with oral and local mesalamine for remission induction, and then continued the maintenance therapy. Annual follow-up sigmoidoscopy and colonoscopy 3 years later demonstrated gradual regression of the pseudopolyp with underlying quiescent ulcerative colitis, and more remarkable regression was noted another 3 years later (Fig. 3b). Multiple follow-up biopsies of the mass confirmed the diagnosis of a giant pseudopolyp with no dysplasia.

4. Discussion

Inflammatory pseudopolyps are formed in the regenerative and healing phases of ulcerated epithelium, and this is seen as islands of granulation tissue surrounded by mucosa with ulceration. Pseudopolyps are found in 12.5–74% of the patients with ulcerative colitis and it is known that they occur about twice as often in these patients as compared to that in the patients with Crohn’s disease. When a pseudopolyp is larger than 1.5 cm, which is rare, it is called a ‘giant pseudopolyp’ and these are divided into the following: 1) localized multiple pseudopolyps, 2) localized giant pseudopolypsis, 3) generalized pseudopolypsis and 4) long finger-like pseudopolyps. They may be found in both the active and quiescent phases of inflammatory bowel disease (IBD) and they tend to be detected early in the course of the disease. Maggs et al. reviewed the literatures and identified reports of 81 giant pseudopolyps in 78 patients with IBD. In those with ulcerative colitis, the majority had extensive colitis and none had proctitis, which may suggest the relationship between the incidence of giant pseudopolyps and the extent of

Figure 1  Case 1: (a) Colonoscopic findings of the giant pseudopolyps in Crohn’s disease; multiple longitudinal aphthous ulcers in the whole colon and a huge hyperemic and multilobulated tumor in the sigmoid colon, and (b) regression of the pseudopolyp on the background quiescent colitis six months later.
IBD. Giant pseudopolyps were located throughout the colon although the majority were in the transverse and descending colon.

Giant pseudopolyps usually have no specific symptoms, but they may occasionally cause intussusceptions or luminal obstructions, which require emergency surgical resection. In addition, another clinical important factor is a misdiagnosis of malignancy. In the patients with a long history of IBD, giant pseudopolyps can be confused with a dysplasia associated lesion or mass (DALM) and in the patients without a definite past history of IBD, they may also be mistaken for colon adenocarcinomas that require surgery. However, carcinoma rarely occurs within the first 10 years of IBD and the neoplastic lesions in these patients often present as flat or depressed abnormalities and not as protruded or pedunculated lesions, although patients with ulcerative colitis and Crohn’s disease are at an increased risk for developing dysplasia and carcinoma.

Two previous reports demonstrated occult dysplasia arising in a giant pseudopolyp in Crohn’s colitis and malignancy in ulcerative colitis although giant pseudopolyps themselves are generally regarded as having no malignant potential. Therefore, it has been suggested that colonoscopy with multiple biopsies can reveal the nature of this lesion and this is considered sufficient to establish a diagnosis and to avoid additional surgery. However, although pseudopolyps themselves are benign, the presence of pseudopolyps is known to be an independent marker of increased risk of malignancy and is associated with double risk of colorectal carcinoma in ulcerative colitis because their presence can reflect previously severe inflammation. Moreover, the possibility of sampling errors is higher in the case with large lesions that are incompletely visualized and inadequately biopsied. To the best of our knowledge, this case represents the first report of regressed giant pseudopolyps in patients with IBD and who were on adequate medical therapy during endoscopic follow-up. Although data about the clinical course and medical therapy of giant pseudopolyposis is lacking, it is reported that they rarely regress with medical management alone and they sometimes require surgical or endoscopic resection because these large colonic masses are composed of heaped-up areas of granulation tissue and fibrosis. Katz et al. reported that three patients with Crohn’s colitis and giant pseudopolyps and who were treated without surgical resection showed no change in these masses over 4 years of follow-up. However,
Figure 4  Case 2: (a) Part of the background inflammation. Glandular distortion and cryptitis in mucosa and intense infiltrate of lymphocytes and plasma cells in the lamina propria. (b) Part of the giant pseudopolyp. The colonic polyp showing finger-like mucosal extension supported by submucosa consisting of a variable mixture of inflammatory tissue.

the patients described in these cases showed regression after the administration of immunosuppressant (azathioprine) or mesalamine. Surgical resection is inevitable when giant pseudopolyps present with obstructive symptoms such as luminal obliterations and/or intussusceptions or they cannot be removed by polypectomy. But in most cases, surgery is not needed and a precise diagnosis can be made by colonoscopy and multiple biopsies. Nevertheless, follow-up colonoscopic evaluation of giant pseudopolyps for surveillance should be considered because regression of these pseudopolyps might be expected, and their presence is a potential risk for colorectal carcinoma in IBD.

This report illustrates 2 unusual cases of giant pseudopolyps associated with Crohn's disease and ulcerative colitis, and these lesions were initially confused with villous adenoma or adenocarcinoma, but they showed regression after adequate medical therapy.

References