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Colon Obstruction and Gradual Regression of Giant Pseudopolyps in Inflammatory Bowel Disease

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Authors' contributions

This work was carried out in collaboration between all authors. Author RHA designed the study, wrote the draft of the manuscript and managed the literature searches. Author FBP perfomed endoscopy and image diagnosis. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Inflammatory pseudopolyps associated with inflammatory bowel disease occur on inflamed colon mucosa due to the regeneration and healing of ulcerated epithelium. They are classified as giant when they are over 1.5-cm in diameter. These are a rare, benign complication, but can be similar in appearance to colorectal cancer. It has been reported that they do not usually regress after medical treatment, requiring endoscopic resection or even surgery. In this paper, we report an unusual case with gradual regression of giant pseudopolyps with medical treatment, in a patient with inflammatory bowel disease, and another very uncommon case of a giant pseudopolyp in indeterminate colitis, with obstruction requiring surgery, as it was not possible to rule out carcinoma. A multidisciplinary team is very important.

Keywords: Giant pseudopolyp; inflammatory bowel disease; regression; obstruction.

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1. INTRODUCTION

Inflammatory pseudopolyps (IPs) occur on inflamed colon mucosa, in which there is a process of regeneration and healing of ulcerated epithelium. Rarely over 1.5-cm in diameter, when they do exceed this threshold, they are referred to as giant pseudopolyps. They are benign but similar to colorectal cancer (CRC) in appearance, potentially resulting in unnecessary surgery. We report two cases of giant pseudopolyps in intestinal bowel disease (IBD), one with projecting masses in the colon that gradually regressed with medical treatment, and another with features similar to malignancy with obstruction.

2. PRESENTATION OF CASES

2.1 Case 1

A 44-year-old man with a 12-year history of left-sided ulcerative colitis was monitored on an ambulatory basis, having been under treatment with oral mesalazine (1 mg/day) for 8 years. He presented moderate flare-up of left colitis 6 years earlier, for which he received oral steroids and topical treatment (mesalazine suppositories); these were discontinued after 1 year and he had not been treated since then. Follow-up colonoscopy was performed 2 years earlier, and a pseudotumoral mass was found in the transverse colon (Fig. 1). It was an excrescent mass with multiple lobes with an erythematous surface and superficial erosions, occluding from a quarter of the lumen up to half in some sections, and 20 cm in length, running from approximately the transverse colon to the splenic flexure, with some IPs in the rest of the colon as well as mild proctitis. Biopsies of the mass confirmed active ulcerative colitis, without dysplasia, while other colon biopsies were almost normal.

After this colonoscopy, the patient was referred to the IBD clinic at the hospital. The patient did not have any symptoms, with normal findings on physical examination and in the blood tests (including faecal calprotectin), except for mild iron-deficiency anaemia (Hb 12.6 g/dL) that was corrected with oral iron supplements for 3 months. Additionally, tests for infection were negative.

The patient was informed of the different options (treatment and colonoscopic surveillance or surgery). Treatment was re-started with oral mesalazine (now at 4.8 mg /day), mesalazine suppositories and oral beclomethasone (5 mg/day during 1 month). Six months later the mesalazine dose was reduced to 3.6 mg/day. In two follow-up colonoscopies, performed at 6 month intervals, it was seen that the size of the mass progressively decreased. The next colonoscopy was carried out after 1 year, finding IPs, some isolated and others in clusters. These were less than 4 cm in diameter and were found in the transverse colon and splenic flexure, with no mass (Fig. 2).

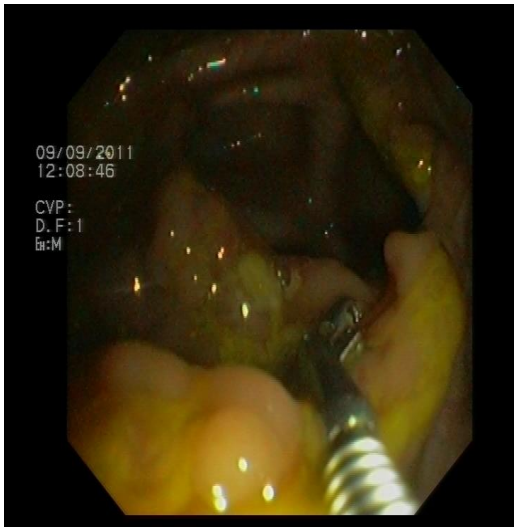

Fig. 1. Colonoscopy findings of the polypoid mass in the transverse colon

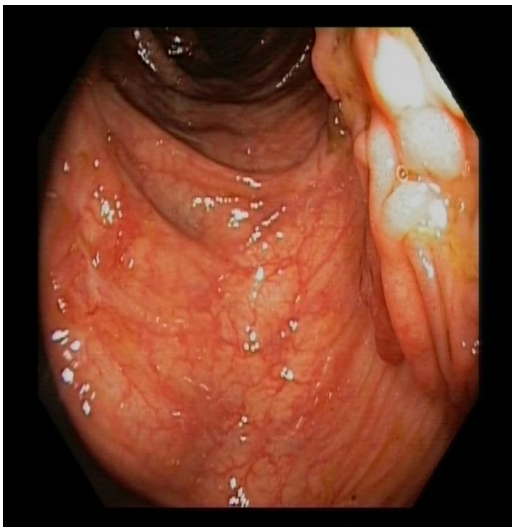

Fig. 2. Progressive regression of the pseudopolyp mass after two years of treatment

Histological analysis revealed unspecific inflammatory changes without dysplasia. Colon magnetic resonance imaging was also performed, indicating two areas of polypoid wall thickening (2.5 and 3 cm in diameter) in the splenic flexure of the transverse colon, with no signs of active IBD or tumour invasion. We will offer yearly follow-up colonoscopies.

2.2 Case 2

A 70-year-old man with a 17-year history of left ulcerative colitis was on oral mesalazine treatment at 3 g/day. In 2008, he developed constipation and rectal bleeding. Abdominal palpation revealed left iliac fossa pain, without masses or peritonism. Blood tests indicated iron-deficiency anaemia (Hb 12.7 g/dl) while the levels of CRP and ESR were 2-5 mg/dL and 69 mm/h, respectively. In colonoscopy, moderate left-sided ulcerative colitis was observed with a pseudopolypoid mass more than 10 cm in length in the sigmoid colon (with no histological signs of malignancy).

Since then, in 2010, treatment with 125 mg of azathioprine was initiated, given that the patient had had various episodes of steroid resistance, with poor tolerance of topical treatment, and no changes had been observed on colonoscopy. In 2011, he was admitted to hospital with symptoms of partial intestinal obstruction and a moderate flare-up, being treated with intravenous steroids at 1 mg/kg/day, after infection and other complications had been ruled out, and the obstruction resolved. ACT scan of the abdomen and pelvis found thickening of the wall over an 18-20 cm stretch of the rectosigmoid colon, compatible with ulcerative colitis, and no signs of abscess or obstruction. In colonoscopy, we observed rectal ampulla up to 10 cm from the pectinate line with granular, friable, erythematous mucosa and erythematous IPs; between 10 and 20 cm, mucosa was normal with IPs, some up to 2 cm in diameter, with mucosal bridges, and blood remains coming from the mass; from 20 to 30 cm, the mucosa had similar characteristics in the rectum, with longitudinal serpiginous ulcers; and at 30 cm from the pectinate line, the previously detected stenosing growth impeded the passage of the endoscope probe (Fig. 3).

Endoscopically, the findings were more like Crohn's disease than ulcerative colitis. Histological analysis indicated intestinal bowel disease in the acute phase with IPs, though it could not be determined which type. Leukocyte scintigraphy was also performed, confirming abnormal findings in the sigmoid colon and rectum only.

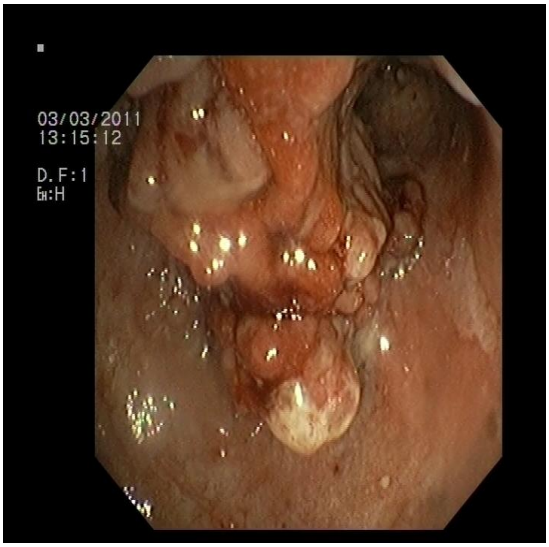

Fig. 3. Colonoscopic findings of obstructing polypoid mass in the sigmoid colon

After discussion between the medical and surgical teams, given the clinical picture and that it was not possible to rule out malignancy, we carried out sigmoidectomy (16 cm) using a laparoscopic Hartmann procedure. We decided to perform a partial resection of the colon instead of proctocolectomy, due to the suspicion of Crohn's disease, based on the most recent endoscopic and histological findings, and the patient´s age. The findings in histological analysis of tissue were compatible with active inflammatory bowel disease without dysplasia. Subsequently, he had moderately severe proctitis in the rectal stump that receded with topical treatment with mesalazine suppositories, he developed a parastomal hernia that was repaired and he underwent intestinal reconstruction surgery with termino-terminal colorectal anastomosis. Since then, treatment with azathioprine was continued and the patient has reported no digestive symptoms, being in endoscopic remission.

3. DISCUSSION

IPs appear in severely inflamed mucosa, where ulcers develop and small islands of residual mucosa are formed, these becoming elongated due to the forces of peristaltism and faeces, leading to polyps with re-epithelisation of the

mucosa [1]. They are twice as common in ulcerative colitis as in Crohn's disease, and no previous cases have been reported in indeterminate colitis [2]. In various studies, their overall incidence has been found to be greater than 12.5% [2,3]. These IPs tend to be small, being called giant IPs on the rare occasions that they reach 1.5-cm in diameter. They are classified in various ways depending on their morphology and distribution: localized multiple pseudopolyposis, giant pseudopolyposis, generalised pseudopolyposis and filiform pseudopolyposis [4]. IPs may be in an active or a quiescent phase. They are related to the extent of the IBD, and are most common in the transverse and descending colon [2].

Symtomatology can be very varied, from asymptomatic patients, appearing as an endoscopic or radiological finding, to patients presenting with abdominal pain, diarrhoea, rectal bleeding, among other symptoms, and even intestinal obstruction [2] and intussusceptions [5], both requiring urgent surgery. The differential diagnosis includes masses secondary to ischaemic or infectious colitis, adenomatous polyps, dysplasia associated with lesions or masses and growths or carcinomas [2].

Cancerous lesions in IBD are often flat or depressed, rather than protruding. IPs themselves do not develop into a malignancy, but a cluster of them may hide dysplasia, and also indicate previous severe inflammation, which does predispose to malignancy [6]. Further, some studies have found a statistically significant association between the presence of IPs and a higher risk of CRC, despite endoscopic follow-up and anti-inflammatory treatment [7,8]. IPs are independent risk factors for dysplasia and carcinoma, added to the fact that IBD is associated with a higher risk of developing CRC [8,9].

Reports in the literature include a case of occult dysplasia in a giant pseudopolyp in Crohn's colitis [10] and another case of occult cancer in a giant 8-cm pseudopolyp causing colon obstruction, in a patient with a 15-year history of IBD [11]. Concerning intestinal obstruction by IPs, despite a proper diagnosis by endoscopic, histological and radiological analysis, carcinoma cannot be completely ruled out [2]. For this reason, surgical resection tends to be performed in these cases.

To our knowledge, our second case is the first reported case of giant IP in indeterminate colitis. We considered partial resection rather than proctocolectomy, as we were unable to make a definitive diagnosis and given the patient's age and distal involvement, and no history of activity along the rest of the colon at any point in the course of the disease.

When an IP is found, the ideal treatment is polypectomy, en bloc when possible [12]. In the literature, it is described that giant IPs do not usually regress with conservative management alone [2,13] and if the IP cannot be removed endoscopically, surgery tends to be recommended, but there is a lack of conclusive evidence to support this as a policy. Indeed, in recent years, some cases have been reported of giant IPs with inflammatory activity in the colon that do regress with medical treatment [3], similar to our first case. It could preclude unnecessary surgery.

In some cases, surgery is not necessary, and close follow-up with colonoscopies and multiple biopsies can be considered, given their benign nature and the fact that, sometimes, there may be regression of the IP with medical treatment. However, we must be cautious in the case of large lesions that are not fully visualized or properly biopsied, as these circumstances make diagnostic errors more likely [3,12].

4. CONCLUSION

To conclude, if giant IPs are accompanied by inflammation in the colon, they can be managed by treating the disease medically, as regression has been observed in some cases. We report a case in which there was gradual regression, as well as an exceptional case of a giant IP in indeterminate colitis with obstruction. Endoscopic resection should be considered, but if this is not feasible, instead of the option of surgery, we could consider colonoscopic surveillance, with regular check-ups and multiple biopsies, to allow for IP regression with treatment, while informing patients about the risks. Patients need surgical intervention in the event of complications, such as obstruction and intussusception. In all cases, there should be joint decision making between the patient´s treating physician, the endoscopist, the surgeon and the patient him/herself.

CONSENT

All authors declare that written informed consent was obtained from the patients for publication of this case report and accompanying images.

ETHICAL APPROVAL

Not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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