Ulcerative Colitis Associated with Gastric Heterotopia in the Rectum: a Case Report

Răzvan-Geo Antemie1, Adina-Patricia Apostu1, Liliana Rogojan2, Romeo Ioan Chira1,3

INTRODUCTION

Gastric heterotopia (GH) is defined as the presence of morphologically normal gastric tissue at a non-physiological site, coexisting with the original tissue. Although it is not uncommon to see it in the esophagus, duodenum or small intestine, it is exceptionally rare to discover gastric mucosa in the rectum. Here we report the case of a 46-year-old male with a 10-year history of ulcerative colitis in whom the surveillance rectosigmoidoscopy detected a Mayo score of 1 for ulcerative colitis activity and a middle rectal sessile polyp. Pathological examination revealed an active chronic colitis, and rectal mucosa with heterotopic gastric mucosa composed of oxyntic glands was depicted. A month later, the patient was reevaluated and endoscopic mucosal resection was performed. Histology confirmed the gastric body type mucosa co-mingling with rectal mucosa.

Key words: ulcerative colitis – heterotopic gastric mucosa – rectal polyp.

Abreviations: 5-ASA: 5-aminosalicylic acid; CK 7: cytokeratin 7; EMR: endoscopic mucosal resection; GH: gastric heterotopia; H2: Histamine 2 (receptor); NBI: narrow band imaging; PPI: proton pump inhibitors; UC: ulcerative colitis.

CASE REPORT

A 46-year-old male patient with a 10-year history of UC presented to our gastroenterology department for his surveillance colonoscopy for the underlying disease. The disease extended up to 18 cm proximally to the anal verge and it was treated with orally administered 5-aminosalicylic acid (5-ASA). The patient experienced only mild flares, controlled with topical administration of 5-ASA and budesonide foam. At presentation, the patient had no symptoms such as pain, diarrhea, rectal bleeding, pallor or fever. During the endoscopic examination a Mayo score of 1 for UC activity was established and a 1.5 cm middle rectal sessile polyp was visualized (Fig. 1a). Examination with the Narrow Band Imaging (NBI) technique (Fig. 1b) raised the suspicion of a villous polyp. Because of the mildly active UC at that time,
polypectomy was not performed and only biopsies were taken. The histopathological examination detected a chronic active UC as well as GH (Fig. 2). A month later, the patient was admitted and endoscopic mucosal resection (EMR) was performed; two hemostatic clips were applied to close the mucosal defect. The resected lesion was sent to the Pathology Department and GH was reconfirmed. At one-year follow-up, the patient was reexamined endoscopically and no macroscopic remnants were detected.

We encountered in this case was foveolar-type epithelium coexisting with the endogenous tissue [13]. The definite diagnosis of this entity is based on histology with hematoxylin and eosin staining; immunostaining is used to consolidate the diagnosis if uncertain, the gastric epithelium being positive for cytokeratin 7 (CK 7) regardless of its location [1].

The median age for this condition is 22 years [7] and ranges widely from infancy [14, 15] to adulthood [13, 16-18] with more than 50% of cases being reported in Europe or North America [7]. It can either have no clinical manifestations, as was in our patient's case, or be symptomatic, with symptoms ranging from non-specific abdominal ones to sometimes important hematochezia, which is usually found in pediatric patients [14, 15, 19]. It is commonly found at 5 to 8 cm from the anal verge on the posterolateral wall of the rectum [7, 20]. In our patient, the polyp was found in the middle rectum, where UC was also active.

The histology of GH ranges from oxyntic mucosa, mixed oxyntic and antral mucosa, to antral mucosa and even, in very rare cases, cardiac mucosa. Helicobacter pylori infection is possible [7]; a case of GH was reported in the literature, in which Helicobacter pylori was found at the site of the GH and not in the stomach [2]. Treatment with histamine H2 receptor antagonists and proton pump inhibitors can be useful [2, 13, 14, 21], with resolution or at least control of the symptoms [2, 21]. The treatment of choice is surgical or endoscopic excision [20].

Gastric heteropia can present under various forms of lesions. In most cases, it is nonpolypoid. Only in 36% of cases it appears as polyps [7]. In our case, GH presented as a flat and slightly depressed (IIa + IIc) lesion. In 24% of the cases described in literature, GH was associated with congenital malformations, with rectal duplication being the most prevalent one [7]. Gastric heteropia might progress to malignancy, but the rate of malignant transformation is unknown [8, 9].

To the best of our knowledge, the association between GH and UC has not been reported in the literature. At the moment, we do not know how the two entities influenced one another. One might suppose that these two types of lesions independently affected the rectum, or that, given the patient's relatively young age and the chronic inflammatory environment, GH might have been developed subsequently to
UC, through activation of pluripotent cells. As both conditions may have malignant potential, surveillance is recommended even in asymptomatic patients.

**CONCLUSION**

The reported case illustrates the unique finding of heterotopic gastric mucosa presenting as a flat rectal lesion in a patient with ulcerative colitis. With only a few cases of GH in the rectum having been reported so far, it is worthy of consideration in young adults found with rectal polyps. To the best of our knowledge, this association is the first one described in the literature to date, opening new questions regarding both the evolution of ulcerative colitis and the risk of developing adenomas and adenocarcinomas from GH.

**Conflicts of interest:** None to declare.

**Authors’ contribution:** R.G.A, A.P.A. and R.I.C. managed the patient and contributed to the diagnosis and follow-up. L.R. performed the histological analysis. All authors contributed to the writing of the manuscript and approved the final version.

**REFERENCES**