CASE REPORT

A 51-year-old male underwent an elective outpatient endoscopy for an average risk colon screening. An erythematous flat lesion, measuring about 2.5 cm in its greatest diameter was noted in the rectum (Figure 1) and biopsies were obtained. Histological examination revealed multiple fragments of gastric oxyntic mucosa with mild chronic inflammation (Figure 2) and several foci of prolapsed glands in the stroma consistent with gastritis cystica profunda. Transitional gastric oxyntic mucosa and colonic epithelium were also noted (Figure 3). Testing for *Helicobacter pylori* organisms was negative.

DISCUSSION

Gastric heterotopia of rectum is a rare finding with approximately 70 cases reported in English literature. In 1939, Ewell et al. reported first case of gastric heterotopia in rectum. Subsequently, several other case reports have been reported [1]. Foregut and midgut derived organs including esophagus, duodenum and Meckel’s diverticulum are most commonly involved sites followed by rectum. Other extremely unusual sites include mediastinum, spinal cord and scrotum [2–4]. Painless rectal bleeding was the most common presentation followed by diarrhea, tenesmus and abdominal pain. Other symptoms and clinical presentations though rare

Figure 1: Endoscopic image of rectum showing flat to slightly raised lesion.

Figure 2: High power view of gastric oxyntic mucosa (H&E stain, x40).

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include bowel perforation, megacolon, intussusception, perianal and recto-vesical fistulas. The patient did not present with any clinical symptoms and a sessile polyp was discovered on routine screening colonoscopy.

In a large meta-analytic study to date, Iacopini et al. [5] analyzed 78 reported cases of gastric heterotopia involving rectum. In their study, they observed a wide range in the age from 0.5 year to 69 years with a median age of 22 years and 66% of the patients in their study were male. On endoscopic evaluation, 51% of these lesions were non-polypoid in appearance followed by polypoid and ulcerated morphology in 49% of the cases. On histologic evaluation, gastric oxyntic mucosa was most commonly observed (83%) followed by mixed oxyntic and pyloric type mucosa (11%) and pyloric type mucosa (3%). It is interesting to note that our case demonstrated oxyntic mucosa with features of prolapse consistent with gastritis cystica profunda. To the best of our knowledge, this finding in rectum has not been reported in literature. Schaffer et al. reported a case of adenocarcinoma of the ileum arising from multifocal gastric heterotopia with gastritis cystica profunda [6].

Though, the exact mechanism of gastric heterotopia is not known, several theories have been postulated including inflammatory – adaptive response of native anatomic site with resultant metaplastic change [7], abnormal differentiation of pluripotent endodermal stem cells [8]. Beck et al. proposed possible role of homeobox genes for promoting epithelial differentiation in the presence of local inflammation [9].

Diagnosis of gastric heterotopia by histologic examination is usually straightforward with almost no differential diagnosis. However, major pitfall to be aware of, is floaters and contaminants. We reported the initial biopsy specimen results from our patient as possible contaminant – floaters and requested repeat biopsies which once again showed gastric mucosa and a diagnosis of gastric heterotopia was made. Though, histamine 2 receptor blockers are helpful in treating rectal bleeding, removal by surgical-endoscopic method is treatment of choice and curative. It is unknown if gastric heterotopia in rectum confers an increased risk for malignant transformation. Ko et al. reported first case of an invasive adenocarcinoma of the transverse colon arising from gastric heterotopia [10]. Immunohistochemically, the tumor exhibited gastric phenotype [CK7+, MUC5AC+, CK20-, CDX2-, MUC2-]. It is difficult to accurately estimate the true incidence of malignant transformation in gastric heterotopia of rectum due to relatively small number of cases reported in literature. Intriguingly, possibility of under estimated risk could be secondary to obliterated small focus of heterotopia or non-sampling of small heterotopic gastric mucosa in adenocarcinomas and hence complete removal and surveillance is recommended in all cases.

CONCLUSION

Gastric heterotopia is a rare finding in rectum and recognition of potential pitfalls including contaminants, floaters and artifacts is important to render a definitive diagnosis. Though, unknown about their potential risk for malignant transformation complete excision of these lesions is advised.

Keywords: Adenocarcinoma, Gastric heterotopia, Gastritis cystica profunda

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