

A Rare Combination of Gastric Inflammatory Fibroid Polyp and Hiatal Hernia

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Abstract

Inflammatory fibroid polyp (IFP) is a rare solitary gastrointestinal lesion of unknown etiology. It generally presents as polypoid mass in the gastric antrum. Mostly affects adults at average age of 60 years. IFP can cause different symptoms such as abdominal pain, gastrointestinal bleeding, intestinal obstruction or intussusception. IFP is a benign lesion and it may rarely mimic the submucosal tumor. The diagnosis can be possible after removal of the detected lesion either by laparoscopic or open approach. In the present paper, we report a patient with gastric IFP and hiatal hernia. IFP was excised throughout the gastrotomy and following hiatal hernia was repaired. According to our best knowledge, this may be the first case report of gastric IFP concomitance with a hiatal hernia.

Keywords: Gastric Inflammatory Fibroid Tumor, Vanek, Diagnosis and Treatment

1. Introduction

Inflammatory fibroid polyp is a relatively rare disorder which is thought to be clinically and histologically benign, and was first described as “polypoid fibroma” in 1920 by Kojetzny [1]. It may occur throughout the digestive tract, but is most often seen in the stomach (approximately 80%) and usually occurred either in the antrum or prepyloric region [2]. It is slightly more common in women (female:male ratio 1.6:1) [3]. It can be encountered in all age group but peak incidence is between sixth and seventh decades [4]. IFP originates from submucosa and grows as a solitary polypoid or sessile mass which may macroscopically mimic gastric cancer. When it is in the stomach, most frequently seen symptoms are vomiting, epigastric pain and bleeding. The lesion located in the small bowel can cause intussusception and obstruction. The diagnosis of IFP remains difficult because of all available methods such as barium swallow or even endoscopic with endoscopic ultrasonography (EUS) provide only nonspecific, insufficient information. In the case of submucosal lesions, standard biopsies are insufficient in obtaining adequate tissue. So that endoscopic tumor excision or laparotomy is recommended. In this paper, we aimed to report a patient with IFP and hiatal hernia and to review the literature.

2. Case Report

A 75 year-old man was referred to our hospital with complaints of nausea, abdominal pain and distention which was known for three years. Endoscopic examination had been performed from the same complaints three years ago. Endoscopy revealed a hernia pouch at 7th cm below the Z line, and a 5 - 6 cm diameter of hiatal hernia and stomach was torsionized from this bare area. We could not perform endoscopic biopsy, because of the severe elevation in his arterial tension. A barium swallow was recommended, but he accepted neither barium swallow nor treatment. In his last admission, endoscopic examination showed a giant hiatal hernia, chronic gastritis and a mass in the bulb; then multiple biopsy was obtained. On histopathological examination, chronic inflammation and erosion were seen. Computed tomography (CT) revealed a giant hiatal hernia and a 2 × 7 cm hypodense image in hernia bowel which was close to liver at the right side (**Figure 1**).

In his history, he was operated for Benign Prostate Hypertrophy and right inguinal hernia. No specific family history was identified. On laboratory examination, WBC was 13,800/mm³.

We have decided to perform an exploratory laparotomy and Nissen fundoplication, because of he had a

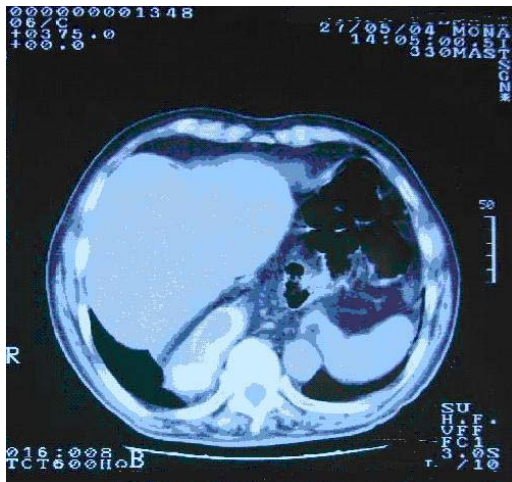


Figure 1. A giant hiatal hernia shown by CT.

giant hiatal hernia concomitance with a gastric tumor. At laparotomy, a 5×3 cm mass was found at the antrum of the stomach. It was excised after a gastrotomy was performed at the region of prepyloric antrum. In the frozen section, there were no malign cells at the basement of the lesion. Histopathologic evaluation of the specimen demonstrated a fibroblastic stroma with extensive thick-walled capillary vessels, spindle cells, and an inflammatory infiltrate with numerous eosinophils within the submucosa (**Figure 2**).

3. Discussion

IFP arises from submucosa of the gastrointestinal tract. It consists of loose connective tissue with a rich vascularite and abundant fibrous component [5]. Usually the lesion was sessile or polypoid with ulceration of the overlying mucosa [6]. IFP was mainly located in the pyloric region of the stomach, less frequent in the ileum, and only occa-

sionally in the colon or oesophagus. IFP is non-neoplastic in nature and its cause remains unclear [6,7]. Eosinophilic infiltration which sometimes may occur as a submucosal tumor was also related to parasitic infections such as gastric anisakiasis [8,9].

The clinical presentation and the radiological findings of IFP may change to the size of the lesion and location. Small lesion is usually asymptomatic until the occurrence of pyloric stenosis or small bowel obstruction [5]. Although they are usually small and asymptomatic, it can cause gastrointestinal bleeding, abdominal pain, vomiting, weight loss, intestinal obstruction or intussusception. Physical examination is usually not conclusive and imaginings such as upper GI series, ultrasonography or CT can help diagnosis. Final diagnosis is generally based on endoscopy and histopathological examination.

Histopathologically, IFP has been found to be characterized by a submucosal lesion with a mixture of proliferation of fibroblasts and small blood vessels, accompanying a marked eosinophilic infiltration [10]. Since the distinctive structures for diagnosis are located within the submucosa and at the base of the mucosa, the diagnosis may not be possible in most of these polyps by endoscopic biopsy specimen [2].

The etiopathogenesis of IFP remains unclear. It has been hypothesized that several factors could damage the gastrointestinal mucosa and expose the stroma to several irritants (chemical, mechanical and biological), and stimulate the formation of polyps among certain people [11]. A polyp of this category is a specific response of gastrointestinal stromal tissue of unknown etiology [2]. Electron microscopic study revealed that IFP represented a reactive lesion of myofibroblastic nature [12]. Today, it has been now generally accepted that IFP is not a neoplasia, but a reactive process, either to an allergy or a foreign body and has no malignant potential [13,14]. A few recent studies also revealed a relation between IFP and *H. pylori* infection but an infective ethiology has never been reported yet [11]. In one of these reports, the patient also had an autoimmune diseases (sarcoidosis, rheumatoid arthritis, and ankylosing spondylitis) [15]. This finding supports the possibility of an immunological reaction as a contributing factor.

The majority of gastrointestinal polyps can be diagnosed and treated by endoscopically. This may be performed at a single sitting or as a staged prodecure after biopsy. The problem with submucosal lesions is the low probability of obtaining a definite biopsy. If the tumor is larger than 4 cm, there may be ulceration of overlying mucosa, making biopsy easier. Endoscopists should always suspect submucosal mesenchymal tumors of being gastrointestinal stromal tumour, leiomyoma or leiomyo-

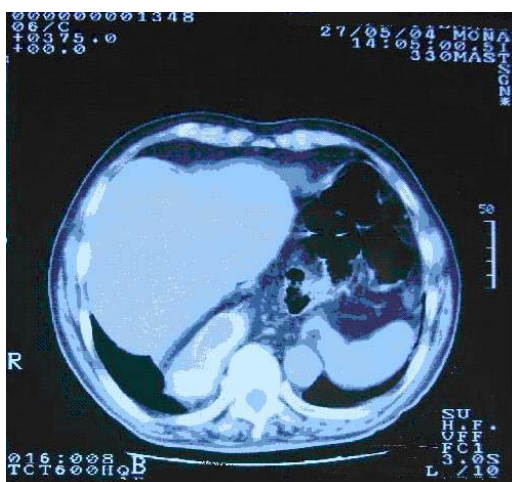


Figure 2. Radiologic view of mass in the stomach.

sarcoma especially when tumor macroscopically mimics a malignant lesion. Biopsy specimens using standart forceps may not be adequate for histological diagnosis when tumor is covered with normal mucosa. Then endoscopic excision/polipectomy preceded with endoscopic ultrasonography should be performed as the best diagnostic method [6]. There were some reports concerning the curative role of endoscopic removal of IFP [17]. Small IFP (generally 1 cm or less in size) can be safely removed by endoscopy, but there is a possibility of local recurrence after operation [16]. But with increasing experience in minimal access surgery, most of these tumors are managed using endoscopic, laparoscopic, or combined endoscopic and laparoscopic approache. An exception is a large submucosal lesion which can cause the disruption of the tumor. In these circumstances, the open procedure is a viable option. In our case, we also preferred open procedure because of the the mass was so huge to be removed by endoscopically and we had no sufficient experience about the laparoscopic gastric surgery.

As a result, we consider that the treatment of IFP is surgical resection and every surgeon should have sufficient knowledge and experience about its diagnosis and surgical treatment.

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