대한외과학회지 : 제 65 권 제 1 호
Vol. 65, No. 1, July, 2003

□ Case Report □

Inflammatory Fibroid Polyp of the Stomach Mimicking Gastric Cancer

Departments of Surgery, [1]Radiology and [2]Clinical Pathology, Uijeongbu St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Uijeongbu, Korea

Kee Hwan Kim, M.D., Hak Jun Seo, M.D., Ji Il Kim, M.D., Chang Hyeok Ahn, M.D., Jeong Soo Kim, M.D., Young Mi Ku, M.D.[1], Ok Ran Shin, M.D.[2], Eun Deok Chang, M.D.[2], Eun Jung Lee, M.D.[2] and Keun Woo Lim, M.D.

위암 양상을 보인 염증성 섬유양 용종

김기환 · 서학준 · 김지일 · 안창혁 · 김정수 · 구영미[1] · 신옥란[2] · 장은덕[2] · 이은정[2] · 임근우

We report a rare case of inflammatory fibroid polyp of the stomach that mimicked gastric cancer. A review of the associated literature is also reported. A 32 year old woman was admitted to our hospital with a history of vomiting and epigastric pain and a weight loss of 10 kg in one month. A radiologic and an endoscopic examination showed a protruding tumor, with diffuse ulceration at the posterior wall of the prepyloric antrum of stomach. Although no malignant cells were histologically confirmed in the biopsy specimens, a subtotal gastrectomy, with a lymphadenectomy, was performed because gastric cancer was suspected, preoperatively. The histopathological diagnosis was an inflammatory fibroid polyp of the stomach. If a submucosal tumor of the stomach is suspected in a preoperative diagnosis, an inflammatory fibroid polyp should be considered as one of the possible differential diagnoses. **(J Korean Surg Soc 2003; 65:72-75)**

Key Words: Inflammatory fibroid polyp, Gastric cancer
중심 단어: 염증성 섬유양 용종, 위암

가톨릭대학교 의과대학 의정부성모병원 외과학교실, [1]방사선학교실 및 [2]임상병리학교실

INTRODUCTION

Inflammatory fibroid polyp (IFP) is an infrequent condition of the digestive tract which is most often observed in gastric antrum and ileum. It is known by several synonyms (Vanek tumour, eosinophilic granuloma, etc.), (*1*) The first case was described by Kaijser in 1937. (2) Its main clinical features are abdominal pain, ulcer-like syndrome, obstruction and/or hemorrhage. Although it usually runs a benign course, surgery remains the treatment of choice. Its etiology is unknown. Since characteristic findings by imaging techniques such as barium study, endoscopy and endoscopic ultrasonography have not been established for IFP, accurate preoperative diagnosis is difficult. Frequently, they are mistaken as gastrointestinal neoplasias. The authors present a case of pyloric obstruction caused by a inflammatory fibroid polyp located at the posterior wall of prepyloric antrum of stomach, mimicking gastric cancer, treated successfully by Billorth I subtotal gastrectomy.

CASE REPORT

A 32-year-old female was admitted to our hospital with a 1-month history of vomiting soon after eating and 10 kg weight loss for 1 month. These episodes were associated with nausea and some epigastric pain, but her appetite was normal. Neither of the patients had a history of allergy nor eosinophilia. Physical examination demonstrated no palpable mass in abdominal region. The white blood cell (WBC) count varied between 6.7 and 9.3 $\times 10^9$/liter. The average differential count was: neutrophil 65%, lym-

Correspondence: Jeong Soo Kim, Department of Surgery, Uijeongbu St. Mary's Hospital, College of Medicine, The Catholic University of Korea, 65-1, Gumo-dong, Uijeongbu-shi, Gyeonggi-do 480-130, Korea. (Tel) +82-31-820-3048, (Fax) +82-31-847- 2717, (E-mail) drbreast@catholic.ac.kr

Received January 29, 2003, Accepted March 20, 2003

phocytes 27%, monocyte 6%, and eosinophil 2%. At no time was there an eosinophilia. Hemoglobin was measured at 12.1 g/dl. The data of blood chemistry were within normal range except preoperative serum alpha-feto protein (AFP) was above 700 U/ml. Post-contrast abdominal CT scan shows an about 3 cm size intraluminally protruded round polyp at the posterior wall of prepyloric antrum of stomach. The intraluminally protruding polyp shows intense enhancement and the base of polyp reveals diffuse hypoattenuate thickening (Fig. 1). Radiological findings were suggestive of a submucosal tumor, such as a malignant lymphoma, leiomyosarcoma, leiomyoma or gastric cancer, but findings were insufficient for an accurate diagnosis. Gastrofibroscopy showed ulcerative protruding mass at the posterior wall of the pylorus (Fig. 2). Only inflammatory tissue without malignant cells was found after histological examination of biopsy specimens obtained through endoscopy. A presumptive diagnosis of a gastric cancer was made, and Billorth I subtotal gastrectomy with lymphadenectomy was performed. The gross appearance of the resected specimen seemed to be that of gastric submucosal tumor (Fig. 3). However, a malignant tumor could not be ruled out because of the diffuse ulceration in the surface. The tumor microscopically consisted of two component: loose collagenous and tight fibrous parts. Eosinophilic infil-

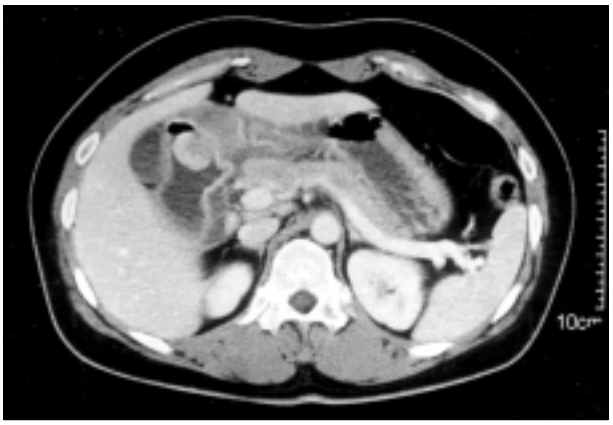

Fig. 1. Post-contrast CT scan shows intraluminally protruded round polyp with wide neck arising posterior wall of the prepyloric antrum of stomach.

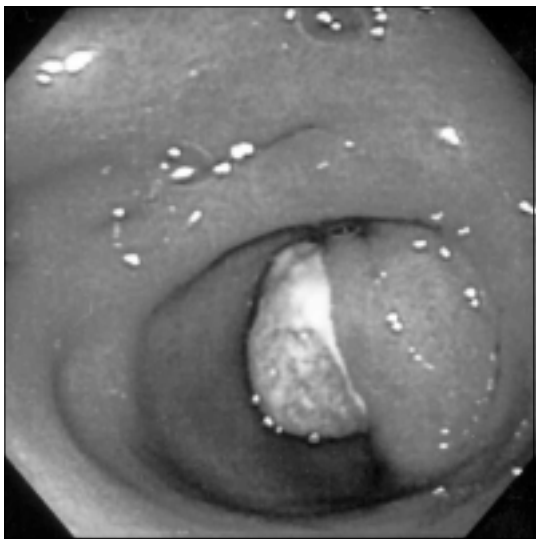

Fig. 2. Endoscopy showed ulcerative protruding mass at antrum posterior wall.

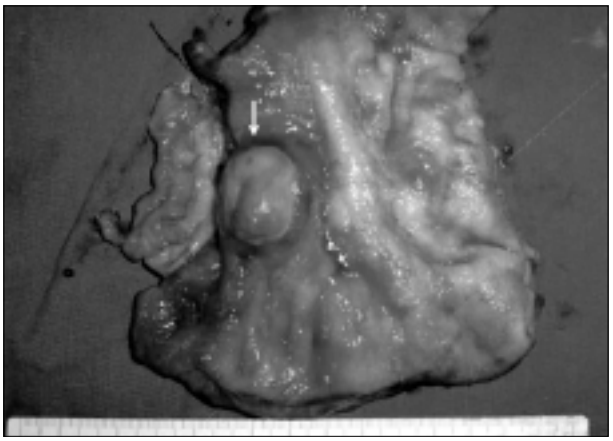

Fig. 3. Gross appearance of resected specimen. submucosal tumor was seen at antrum of the stomach (white arrow).

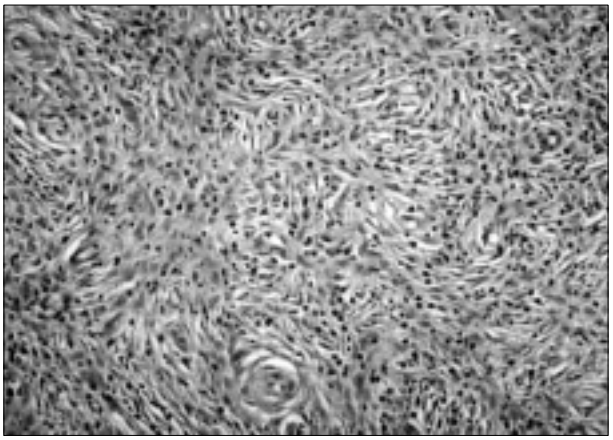

Fig. 4. Histologic finding shows whorls of spindle cells around blood vessels and heavy inflammatory infiltrate rich in eosinophils (H-E stain, ×200)

tration was noted in the major part of the tumor. and growth of fibroblasts and fibrocytes was revealed (Fig. 4). Thus, the tumor was histologically diagnosed as being a inflammatory fibroid polyp of the stomach. She was discharged at tenth hospital day postoperatively without any problems. The patient has remained asymptomatic through biweekly follow ups for two months.

DISCUSSION

A diverse spectrum of benign tumors and tumor-like lesions arise from the stomach. The inflammatory fibroid polyps (IFP) are rare lesions of the digestive tract, they were firstly described occurring in the stomach, however their distribution is universal. Several other denominations have been used to same lesion such as fibroma and eosinophilic granuloma. (*1,2*) Helwig and Rainer (*3*) designated this disease as an IFP, they added the histological feature of scattered concentrc proliferation of connective tissue around blood vessels to Vanek's (*1*) description of the histological characteristics that is: 1) basic connective tissue composed of mesenchymal elements of fibroblasts or fibrocytes and loosely arranged collagenous fibers; 2) infiltration with eosinophilic leukocytes and lymphocytes, the latter being occasionally accumulated in rudimentary lymph follicles, and 3) proliferation of arterioles, blood and lymph capillaries. The histological findings in our patient were in accordance with eosinophilic granuloma. Eosinophilic granuloma of the stomach is now classified into three types: diffuse eosinophilic gastritis, parasitic granuloma and localized polypoid lesion, such as an IFP, which can be either a sessile or protruded lesion with eosinophilic infiltration. (*4*) Almost all cases, including our case, are categorized as an IFP. The clinical presentation varies according to the its location, frequently they are mistaken as gastrointestinal neoplasias, and occasionally present a obstructive symptoms. (*5*) Intestinal obstruction is one of the manifestations, mainly when the lesion occurs nearby the stomach pylorus and ileum cecal region. (*5,6*) In the Japanese literature (*7,8*) patients with IFP are between 50 and 60 years old (mean: 52.7 years) and predominantly female. In the western, most patients are between 40 and 60 years old without any sex preference. (*9*) The precise nature and etiology of this condition remain undetermined. On pathological examination it is a sharply localized lesion in the gastro-intestinal tract, most of these lesions are very vascular. Eosinophilia of the peripheral blood does not occur and malignant change is unknown. (*10*) The differential diagnoses include polypoid adenocarcinoma, hyperplastic mucosal polyp, adenoma, leiomyoma, epitheliod leiomyoma and leiomyosarcoma, and aberrant pancreas. Although difficult to distinguish by gross morphologic features, the IFP shows a distinctive inflammatory response of the mucosal stroma in which eosinophils may be prominent. (*11*) Lesions in the stomach can be divided into a diffuse or a local lesion. (*9*) The diffuse form usually involves the distal part of the stomach, particularly the antrum, but can involve the whole stomach, whereas the local lesion is usually polypoid occurring in the gastric antrum. (*12,13*) Wang et al (*14*) reported that 12 patients with gastric eosinophilic granuloma were diagnosed mistakenly to be stomach cancer before operations, including 3 patients with acute massive hemorrhage from upper alimentary tract and 2 patients with pyloric obstruction. Operations were given to all. No relapses were noted after operation. Since these patients were preoperatively diagnosed as having other lesions, such as hyperplastic polyp, submucosal tumor, carcinoma, sarcoma and lymphoma, almost all underwent surgical resection. It is actually difficult to make a correct diagnosis of this tumor preoperatively. Although endoscopic features of IFP have not been established, the tumor is commonly covered with as smooth surface of normal mucosa. As it grows larger and larger, an ulcer develops in the central part of the lesion. (*15,16*) Since in our case the tumor had a smooth surface, a benign submucosal tumor was strongly suspected. However, a malignant tumor could not be ruled out because of the diffuse ulceration in tumor surface. Biopsy specimens using standard biopsy forceps may not offer useful histological information because the tumor is in the submucosa. There was no definite preoperative diagnostic tools for submucosal tumor, the only means of diagnosing IFP is by histology, thus, in such cases surgery is unavoidable. Recently, if a submucosal tumor of stomach is small and pedunculated type,

the treatment of this benign lesion consists in endoscopic resection and there was no recurrence or malignant degeneration. (*17,18*) If a submucosal tumor of the stomach is suspected, IFP should be considered as one of the differential diagnoses.

REFERENCES

1) Vanek J. Gastric submucosal granuloma with eosinophilic infiltration. Am J Pathol 1949;25:397-411.
2) Kaijser R. Zur Kenntnis der Allergischen Affektionen des Verdauungskanals vom Standunkt des Chirurgen aus. Arch Klin Chir 1937;188:36-64.
3) Helwig EB, Rainer A. Inflammatory fibroid polyp of the stomach. Surg Gynecol Obstet 1953;96:355-67.
4) Yoh H, Natsugoe S, Ohsako T, Yamada K, Suenaga T, Hokita S, et al. Eosinophilic granuloma of the stomach mimicking gastric cancer, report of case. Hepatogastroenterology 2001; 48:606-8.
5) Gutierres AA, Simoneti CA, Braz MA, Consani HF, Ferro MC, Saad WA. Rev Hosp Clin Fac Med Sao Paulo Intestinal obstruction caused by inflammatory fibroid polyp. Report of a case. 1997;52:20-2.
6) Samter TG, Alstott DF Kurlander GJ. Inflammatory fibroid polyps of the gastrointestinal tract. A report of 3 cases, 2 occurring in children. Am J Clin Pathol 1966;45:420-36.
7) Yamabe K, Ogino N, Ogawa N. A case of inflammatory fibroid polyp of the stomach-Statistical analysis of 138 cases reported in Japan. Nippon Rinsho Geka Igakukai Zasshi J Jpn Soc Clin Surg 1990;51:1972-5.
8) Asaki S. Eosinophilic granuloma of the stomach. Bessatsu Nihonrinsho Ryoikibetsu Shohkohgun 1994:5:396-9.
9) Ureless AL, Alschibaja T, Lodico D, Stabins SJ. idiopathic eosinophilic infiltration of the gastrointestinal tract, diffuse and cicumscribed. Am J Med 1961;30:899-909.
10) Veldsman JJ, Middlecote B, Grobler S, Nel CJ. Inflammatory fibroid polyp of the stomach. A case report. S Afr Med J 1984;66:191.
11) Allman RM, Cavanagh RC, Helwig EB, Lichtenstein JE. Radiologic-pathologic correlation from the Armed Forces Institute of Pathology. Inflammatory fibroid polyp. Radiology 1978;127:69-73.
12) Salmon PR, Paulley JW. Eosinophilic granuloma of the gastrointestinal tract. Gut 1967;8:8-14.
13) Barrie HJ, Anderson JC. Hypertrophy of the pylorus in an adult with massive eosinophilic infiltration and giant cell reaction. Lancet 1948;2:1007-9.
14) Wang J, Wu J, Chu G. Gastric eosinophilic granuloma: report on 12 patients. Zhonghua Wai Ke Za Zhi 1995;33:770-1.
15) Matsushita M, Hajiro K, Okazaki K, Takakuwa H. Endoscopic features of gastric inflammatory fibroid polyps. Am J Gastroenterol 1996;91:1595-8.
16) Hizawa K, Iida M, Tada S, Fuchigami T, Kuwano Y, Yao T, et al. Endoscopic evaluation of gastric inflammatory fibroid polyp. Sug Endosc 1995;9:397-400.
17) Khattech A, Mzabi-Regaya S, Makni MK, Bahi S, Larabi B, Chadli A. Fibro-inflammatory polyposis of the stomach. Arch Inst Pasteur Tunis 1987;64:439-45.
18) Kim WJ, Lee MS. A case of Endoscopic removal of inflammatory fibroid polyp of the stomach. Korean J Gastroenterol 1993;25:216-9.