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Jejunal Inflammatory Fibroid Polyp Presenting as Intussusception

— A Case Report with Review of the Literature —

Jae Seon Kim, M.D., So Young Kwon, M.D., Kwan Soo Byun, M.D., Young-Tae Bak, M.D., Jin Ho Kim, M.D., Jong Guk Kim, M.D., Chang Hong Lee, M.D., Jin Woo Ryu, M.D.* and Nam Hee Won, M.D.**

Department of Internal Medicine, Surgery and Pathology,** College of Medicine, Korea University, Seoul, Korea*

A 52-year-old woman was presented with intermittent abdominal pain and vomiting for 10 days. Abdominal CT scan disclosed a dilated small bowel loop with a round solid mass in the right anterior supravesical space. The clinical impression was intussusception caused by small bowel tumor. She underwent an exploratory laparotomy. The macroscopic and microscopic findings confirmed an inflammatory fibroid polyp of jejunum causing intussusception. To the best of our knowledge, this was the 5th reported case of such a presentation in English medical literature.

Key Words: *Inflammatory fibroid polyp, Intussusception, Jejunum*

INTRODUCTION

Inflammatoy fibroid polyp (IFP) is an unusual localized nonneoplastic lesion originating in the submucosa of the gastrointestinal wall and is histologically characterized by a mixture of proliferated fibroblasts and small blood vessels and by numerous inflammatory cells including marked eosinophilic infiltrate[1,2].

It is seen mostly in the stomach and, unusually, along the small bowel and colon[3]. We report an unusual case with IFP of the jejunum causing intussusception with a review of the literature.

CASE REPORT

A 52-year-old woman was admitted due to intermittent abdominal pain for 10 days. The pain was postprandial, periumbilical, migrating and colicky and was accompanied by occasional nausea and vomiting. She also had weight loss of 8 kg for 1 month. There was no history of pulmonary tuberculosis, hypertension or diabetes mellitus. She never smoked or drank alcohol. On admission, her body temperature was 36.4℃, the pulse 72/min and respiration 20/min. Her blood pressure was 100/70 mmHg. She had a chronically ill-looking appearance. The conjunctivae were not pale and the sclerae were not icteric. Her abdomen was flat and mildly tender on the epigastrium without rebound tenderness. Bowel sound was slightly increased. No mass or organomegaly could be noted. There was no abnormal finding on digital rectal examination.

Hemoglobin was 11.5 gm/dl, hematocrit 34.2%, and WBC 9,000/mm^3 (60% segmented neutrophils, 7% band neutrophils and 32% lymphocytes). Total serum bilirubin was 0.9 mg%, AST 40 IU/L, ALT 20 IU/L and albumin 3.7 gm%. Serum electrolytes, CEA and alpha fetoprotein were normal. There was no abnormal finding on the chest X-ray. The upright

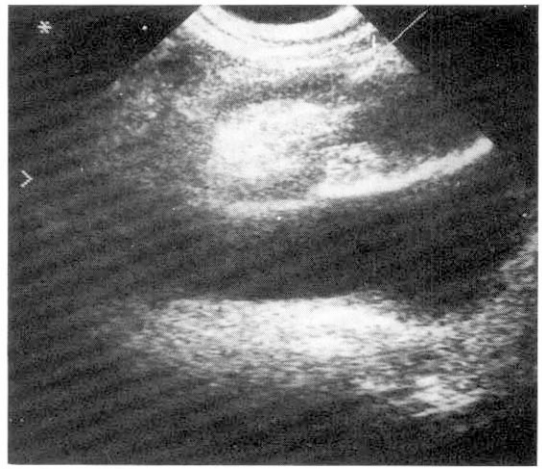

Fig. 1. Abdominal ultrasonogram shows echogenic lesion in supravesical space.

Address reprint requests to: Jae Seon Kim, M.D. Department of Internal Medicine, College of Medicine, Korea University, #80 Guro-dong, Guro-gu Seoul, 152-050, Korea

plain abdominal film revealed a mild ileus of the small bowel. Broad spectrum antibiotics were started and she was forced to take nothing by mouth, but no improvement was noted. On the 3rd hospital day, abdominal ultrasonogram demonstrated an echogenic lesion located in the supravesical space (Fig. 1), and abdominal CT scan disclosed a dilated small bowel loop filled with fluid and a round solid mass in the right anterior supravesical space (Fig. 2).

On the 4th hospital day, she underwent an exploratory laparotomy with an impression of small bowel obstruction by a tumor. During the operation, a jejunojejunal intussusception was noted with an intraluminal obstructing mass. The small bowel was dilated proximally and lymphadenopathy on the surrounding mesentery was noted.

Grossly, it was a well-established polypoid mass (2.3×2.1×2 cm) located perpendicular to the plane of mucosa on the edge of the mesenteric line of the jejunum (Fig. 3). The cut surface of the polyp was homogeneously pinkish-yellow with smooth glistening surface (Fig. 4). Grossly, the serosa and the mucosa of the jejunum were unremarkable. Microscopically, the lesion consisted mainly of a mass of loose connective tissue developed in the submucosa. Loose fibrous stroma infiltrated the muscularis propria, and the variably sized small vessels were observed with diffuse inflammatory infiltrates, mostly eosinophils (Fig. 5, 6). Resected mesenteric lymph nodes showed reactive hyperplasia. All these findings were well compatible with an inflammatory fibroid polyp.

The patient's postoperative course was uneventful with prompt resolution of periumbilical pain and vomiting.

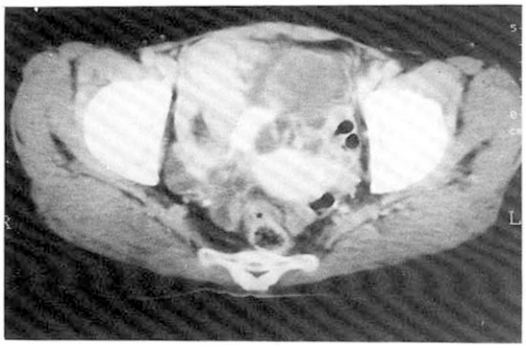

Fig. 2. Abdominal CT scan shows round solid mass in right anterior supravesical space.

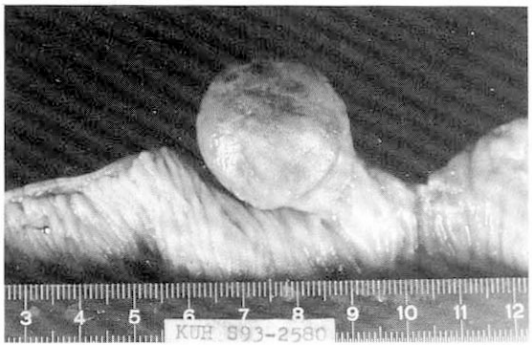

Fig. 3. Resected specimen shows a well-established polypoid lesion located perpendicular to the plane of mucosa on the edge of mesenteric line of jejunum.

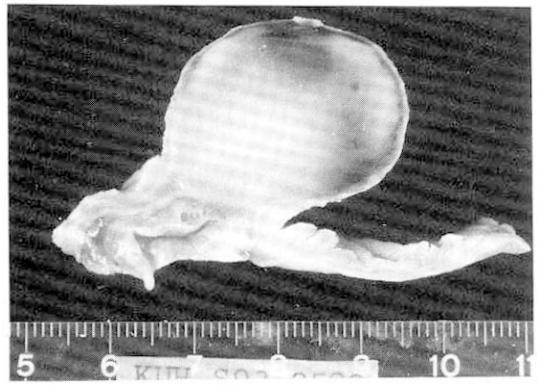

Fig. 4. The cross section of the tumor shows homogeneously pinkish-yellow with smooth glistening surface.

Fig. 5. The mass shows that a loose fibrous stroma infiltrates the muscularis propria, and the variably-sized small blood vessels are observed within diffuse inflammatory infiltrates (hematoxylin and eosin, ×40).

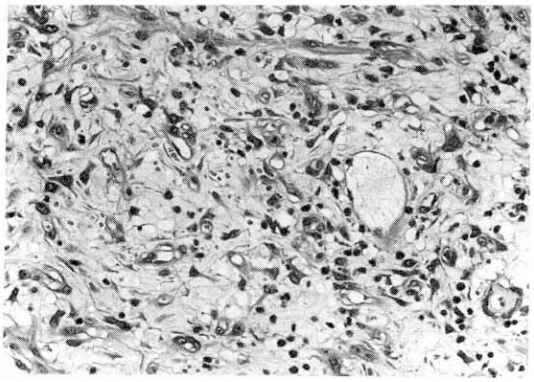

Fig. 6. A richly vascularized cellular fibrocytic stroma with scattered inflammatory cells, mostly eosinophils, is shown (hematoxylin and eosin, ×200).

DISCUSSION

Inflammatory fibroid polyp (IFP) is the name given collectively to a group of lumps, mainly submucosal, in all levels of the gut, which contain a mixture of spindle cells, small vessels and inflammatory cells[4]. It was first reported by Vanek as a "gastric submucosal granuloma with eosinophilic infiltration"[5]. Although many other investigators suggested different names such as eosinophilic granuloma[6], hemangiopericytoma[7], neurofibroma [8] and fibroma[9], "inflammatory fibroid polyp", which was proposed by Helwig and Ranier[10], has been widely accepted.

IFP of the gastrointestinal tract commonly occurs in the stomach, especially in the antrum or prepyloric region[4], and less frequently in the small intestine, especially in the jejunum[3]. Johnstone and Morson[4] reported that among 89 patients with IFPs of the gastrointestinal tract, 14 cases (15.7%) belonged to the small intestine and of them only 4 cases (4.5%) to the jejunum. We could find only 4 cases of IFPs located in the jejunum producing intussusception from literature published in English [11,12].

IFPs are too uncommon for any meaningful clinical and pathologic data to be accumulated[13]. IFP affects both sexes and all ages, with peak incidence in the fifth and sixth decades[14]. It usually presents as a solitary lesion. Multiple lesions had been rarely reported[15]. The gross appearance varies, sessile or pedunculated, and the mucosal surface is often ulcerated on its apex[16]. Size up to 10 cm in the largest dimension has been reported[14].

Although the exact etiology and pathogenesis has not yet been clarified, these lesions are widely assumed to belong to a reactive or inflammatory process rather than to a neoplastic disorder[10,12]. On immunohistochemical and electron microscopic study, several authors suggest that the proliferating cells of IFP are of myelofibroblastic and fibroblastic origin[14,17]. Also, the solitary character and localized nature of these lesions suggest that they are initiated by a localized, possibly particulated agent which gains entrance to the bowel mucosa and induces hyperplasia of stromal cells and vessels[18], but the nature of this initiating agent is still unknown[13].

The presenting symptoms might be variable depending on the location and gross appearance of the lesion[17]. Abdominal pain or vomiting was the main symptom in some patients with IFPs in the stomach, especially in pylorus. But, because most IFPs of the stomach caused only vague abdominal discomfort, most of them were incidentally detected[2]. Obstruction symptoms, such as vomiting and abdominal pain, were frequent initial symptoms of those with IFPs in the small intestine[18]. Intestinal bleeding, anemia and alteration of bowel habits were occasionally noted[12].

Physical examination, radiological studies and laboratory tests were rarely helpful in establishing the diagnosis[15], and confirmatory diagnosis with macroscopic and microscopic examination of the resected lesion was required. Helwig and Ranier[10] suggested that the lesion was characterized grossly by a polypoid appearance and grayish white homogeneous tissue on the cut surface, and histologically by blood vessels, surrounding fibroblasts and infiltration of inflammatory cells, mainly eosinophils. Kim and Kim[2] classified IFPs into four groups depending upon the predominant histologic findings: nodular, fibrovascular, sclerotic and edematous. It suggests that histologic patterns of IFPs may represent an evolutional change when size is increased. Shimer and Helwig[12] pointed out histologic differences between IFPs in the stomach and those in the small intestine. IFPs of the stomach frequently demonstrated a prominent concentric fibrosis around the vessels, and involvement of the muscularis propria was almost always absent. But IFPs of the small intestine did not demonstrate a concentric fibrosis around the vessels, and extension through the muscularis propria with destruction of the muscle was frequently present.

The treatment of IFPs is resection[11,16]. Recently, endoscopic resection was reported as a popular

treatment for IFPs of the stomach[16]. But, exploratory laparotomy is frequently recommended as a treatment of IFPs of the small and large intestines because of the special histologic structure of these polyps and the tendency to bleed[19].

There is only one report concerning a recurrent lesion. Malignant behavior has not yet been suggested[20].

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