Inflammatory myofibroblastic tumor of the stomach: an unusual complication after gastrectomy

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Inflammatory myofibroblastic tumor (IMT) is a benign lesion that was first described in the liver by Pack and Baker in 1953.[1] It is a rare lesion that has been described in many organs and tissues of children and young adults: brain, eye, lung, heart, liver, gallbladder, extrahepatic bile ducts, GI tract, spleen, mesentery, breast, bladder, bone, and so on.[2-7]

IMT is also called inflammatory pseudotumor, plasma-cell granuloma, inflammatory myofibroblastoma, and inflammatory myofibrohistiocytic proliferation. It causes constitutional symptoms, depending upon its location.[8] It is an inflammatory solid tumor that microscopically contains spindle cells, myofibroblasts, plasma cells, lymphocytes, and histiocytes.[9,10]

This report describes an IMT of the gastric remnant in a patient with a prior gastrectomy.

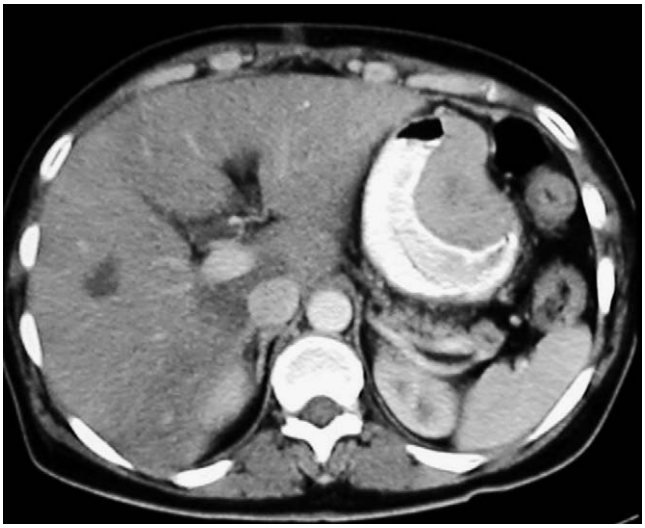

Figure 1. CT of the abdomen shows a round, broad-base filling defect in the gastric wall.

CASE REPORT

A 50-year-old woman presented with persistent vomiting, early satiety, and weight loss. She had a history of a normal upper panendoscopy, cholecystectomy, partial gastrectomy, and a Billroth II end-to-side gastrojejunostomy because of peptic ulcer disease 2 years before consultation. Vital signs and physical examination were normal.

An abdominal US showed no abnormal findings. A CT of the abdomen and the pelvis showed a round filling defect of approximately 7 cm in the gastric wall that caused gastric retention (Fig. 1). Upper panendoscopy demonstrated a normal esophagus and a round, white-gray, sessile, and hard lesion of approximately 7 cm in the posterior wall of the stomach 2 cm closer to the gastrojejunostomy but without obstructing the anastomosis (Figs. 2 and 3). Afferent and efferent jejunal limbs were normal. Microscopic examination of 12 biopsy specimens showed necrotic granulation tissue, and no evidence of carcinoma. A preoperative evaluation was normal.

The patient underwent an exploratory laparotomy. During surgery, adhesion formation was found. Within the gastric remnant, a round, hard lesion was palpated near the gastrojejunostomy. The anterior wall of the stomach was

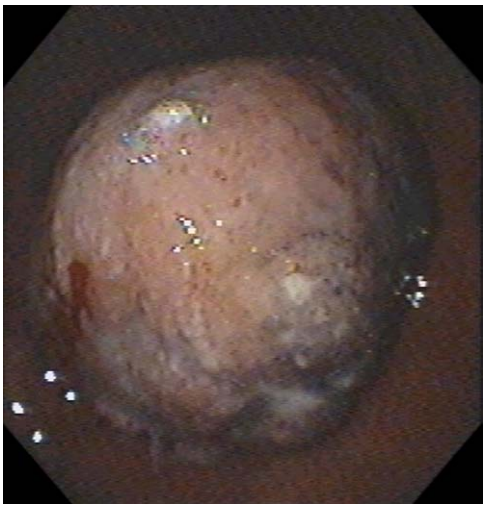

Figure 2. Endoscopic view of the IMT near the gastrojejunostomy.

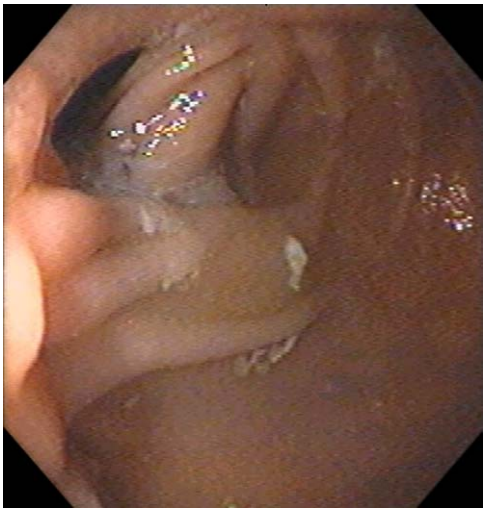

Figure 3. Close-up view of the gastrojejunostomy free of tumor.

opened transversely near the anastomosis, and the whole broad-base lesion was resected for intraoperative microscopic examination.

The pathology revealed an inflammatory myofibroblastic tumor with negative surgical margins (Fig. 4). A subtotal gastrectomy was completed with end-to-side Billroth II reconstruction. The patient had a good outcome and has been followed up for 2 years without any recurrence. Microscopic examination performed after surgery confirmed an inflammatory myofibroblastic tumor.

DISCUSSION

IMT is a rare lesion, considered to be a morphologic expression of, for example, reactive/reparative, infective, and neoplastic processes.[11] IMT has generally been considered a benign tumefaction, having a possible reactive nature because of its occurrence after surgery or trauma, or in association with other malignancies and systemic inflammatory disorders.[10,12]

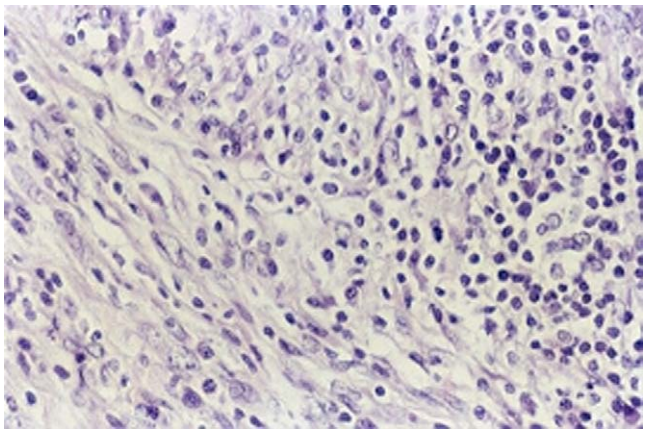

Figure 4. Photomicrograph of the tumor shows infiltration of myofibroblasts, plasma cells, and lymphocytes (H&E, orig. mag. ×20).

IMT is a relatively new term, describing an entity previously known as an inflammatory pseudotumor. It initially was described in the pulmonary system, but it has been recognized that any anatomic location can be involved. There are reports of this pathology involving the GI tract of children and adults.[13-15]

Few reports exist involving the stomach. Kim et al[16] reported a gastric inflammatory myofibroblastic tumor with peritoneal dissemination in a young adult and indicated that it is an infiltrative lesion that often extends through the gastric wall, sometimes reaching adjacent organs, including esophagus, duodenum, peritoneal cavity, spleen, pancreas, and liver. In the present case, the IMT was located completely in the gastric wall, without extragastric involvement. Because of its size (7 cm) and the location near the gastrojejunal anastomosis (Figs. 2 and 3), it caused gastric obstruction and persistent vomiting. Most cases are accompanied by constitutional symptoms and signs of an inflammatory process. When this tumor involves the small bowel, complete intestinal obstruction is a likely complication.[17]

Most cases of IMT require surgical exploration and complete resection to obtain an accurate microscopic diagnosis. The histologic features of this tumor include myofibroblastic proliferation and a varying degree of inflammatory infiltrates, mainly consisting of lymphocytes, histiocytes, and plasma cells. It was initially thought that the IMT was nonneoplastic and represented an inflammatory response, despite its gross and microscopic features of a spindle-cell neoplasm. However, there is evidence that it probably has a potential for local recurrence, development of multifocal tumors, infiltrative local growth, vascular invasion, and malignant transformation.[5,18]

Despite the pathologic findings and their apparent prognostic implications, most affected individuals, regardless of the primary site, have had favorable clinical outcomes.[19]

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