We report two new cases of gastric cancer diagnosed after a bariatric operation. The first case is a 66-year-old male who 3 years after gastric bypass suffered from a perforation of the fundus that was found to be secondary to a diffuse large B-cell lymphoma of the distal stomach. The second case is a 47-year-old woman who presented 12 years after a vertical banded gastroplasty with a gastric pouch outlet obstruction caused by a gastrointestinal stromal tumor (GIST). Based on the few reports of cancer in the literature, analysis of these cases suggests that the main risk of gastric cancer after bariatric surgery comes from the delayed diagnosis of malignancy.

Key words: Lymphoma, gastrointestinal stromal tumor, GIST, gastric bypass, vertical banded gastroplasty, morbid obesity, cancer

Introduction

Malignancy of the stomach in patients who had undergone a bariatric operation may initially be overlooked. The symptoms may be attributed to dietary indiscretion with hard foods, excess intake, or with a gastroenterostomy, as dumping. Furthermore, the patient may be happy with the start of further weight loss. We present two cases of gastric malignancies, whose diagnosis was difficult after bariatric surgery.

Case Report 1

A 66-year-old male was admitted through the emergency-room with fever and left shoulder pain. In past history, at the age of 63 he had undergone a Roux-en-Y gastric bypass (RYGB) for morbid obesity (BMI 44) associated with type 2 diabetes, hypertension, and sleep apnea syndrome.

Six months before the present admission, he was explored at another hospital for severe anemia (Hb 4.7 g/dl) associated with melena, in the context of non-steroidal anti-inflammatory drug (NSAID) use for left scapulalgia. Work-up at time included upper and lower GI endoscopies, and small bowel barium study, and was negative. The patient was then transfused, supplemented with iron and followed in the clinic without recurrence of acute bleeding. While the origin of the anemia was not determined, it was considered to be secondary to NSAIDs, facilitated by a possible iron deficiency due to the RYGBP.
The distal excluded stomach was not suggested or explored as the source of bleeding. On admission to our hospital, laboratory tests showed anemia with hemoglobin 7.6 g/dl, elevated white count (12,890/ml), fibrinogen 9.92 g/l and C reactive protein 329.4 mg/l. Chest X-ray demonstrated a left pleural effusion. CT-scan showed a left subphrenic abscess. Preoperative diagnosis was perforated gastric ulcer. An exploratory laparotomy confirmed a gastric perforation at the level of the fundus, with a 5 cm left subphrenic abscess. A gastrectomy of the distal stomach was performed. Pathology disclosed a diffuse large B-cell lymphoma (Figure 1). Helicobacter pylori (HP) was not identified in the specimen. The patient was treated with chemotherapy after convalescence from this operation.

The last follow-up 10 months after surgery and chemotherapy, demonstrated clinical and radiological remission.

Case Report 2

A 47-year-old lady presented in our clinic 12 years after a vertical banded gastroplasty (VBG) with a history of several months of progressive dysphagia and vomiting. These symptoms had been attributed initially to inadequate respect for dietetic rules after VBG. The symptoms had also been minimized by the patient who was initially happy with the ensuing weight loss. Endoscopy and barium studies demonstrated a subtotal stenosis at the level of the gastric pouch outlet with normal mucosa.

At laparotomy, a 9-cm intramural gastric mass was discovered in the antrum, just below the gastric pouch outlet, and was treated by a total gastrectomy. Pathology diagnosis was a CD117-positive stromal tumor compatible with a gastrointestinal stromal tumor (GIST) (Figure 2). Resections margins were free of tumor invasion. Mitosis count per 50 high power fields was 14, classifying the lesion as high risk together with its size. Additional work-up by abdominal and thoracic CT-scan and PET-scan was negative.

She underwent regular clinical and radiological follow-up every 4 months after this operation. Systemic recurrence was diagnosed by CT-scan in the lungs and the liver 3 years later. She was placed on imatinib treatment and is currently asymptomatic 12 months after recurrence. The liver and lung metastases have shown a 50% decrease in size since initiation of therapy, with a suppression of metabolic activity on PET-scan.

Discussion

The risk of cancer in the excluded distal stomach after RYGBP is unknown. The distal gastric segment is excluded from the alimentary channel and thus from contact with exogenous carcinogens, but could theoretically suffer from prolonged contact with stagnant bile, shown to promote carcinogenesis experimental-