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A gastric stump cancer with unusual appearance

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ABSTRACT

A 60 year old man was referred to our hospital with the chief complaints of abdominal pain and vomiting. He underwent a distal gastrectomy with a Billroth II gastrojejunostomy for a peptic ulcer 13 years ago. Esophagogastroduodenoscopy (EGD) did not reveal any gross lesion in the stomach but depigmented areas were seen in the anastomosis line. The histopathology of the anastomotic area revealed poorly differentiated adenocarcinoma. Gastric stump cancers can be polypoid, fungating, ulcerated and diffusely infiltrating tumors respectively. In our case, the appearance of adenocarcinoma was quite different from that described in the classification system.

Keywords: gastric stump; cancer; appearance.

INTRODUCTION

Globally, gastric cancer is the fourth most common cancer in men, the fifth most common cancer in women, and the second leading cause of death due to cancer (1). It is often diagnosed in an advanced stage. Survival from gastric cancer remains low in the Western world, with reported 5-year survival rates of 10–30% (2), in contrast to survival rates in Asia of 69% (3). The prognosis for gastric cancer depends on its stage; so, detection in the early stage of disease is important, when complete and curative removal is possible.

Gastric stump carcinoma (GSC) is defined as a carcinoma occurring in the gastric remnant at least 5 years after surgery for benign peptic ulcer disease (4). The incidence of GSC has not yet declined because of the long time interval until the development of GSC in the operated stomach; the incidence may increase in the following years as surgery was commonly performed until the early 1980's. Increased frequency of GSC after partial gastrectomy was reported in several studies (5). Fifteen to twenty years after distal gastrectomy, the risk of GSC steeply rises. Average latency period until manifestation of carcinoma in the gastric stump is 20-27 years (6).

Endoscopy is regarded as the most sensitive and specific diagnostic method in patients suspected of harboring gastric cancer. Endoscopy allows direct visualization of tumor location, the extent of mucosal involvement, and biopsy (or cytologic brushings) for tissue diagnosis (7).

Various macroscopic classification systems have been developed for gastric adenocarcinoma. One

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of the more common is the Borrmann system, with classifications of type's I-IV for polypoid, fungating, ulcerated, and diffusely infiltrating tumors, respectively (8).

But occasionally some gastric cancers may not fit into any of the existing macroscopic classification.

Here we report the case of a 60-year-old man with an unusual macroscopic appearance of adenocarcinoma in the resected stomach, who was admitted because of abdominal pain, nausea, and vomiting.

CASE REPORT

A 60 year old man was admitted to our hospital with the chief complaints of repeated abdominal pain, nausea and vomiting. He underwent a distal gastrectomy with a Billroth II gastrojejunostomy for a peptic ulcer 13 years previously. The histopathology of the surgical specimen revealed an active peptic ulcer and there was no evidence of malignancy, no pathological lymph nodes, and Helicobacter pylori stain was negative. A physical examination on admission, there is epigastric tenderness without rebound or guarding and with hyperactive bowel sound. Rectal examination was normal, and his stool was negative for occult blood. Other systems were unremarkable. All routine laboratory tests were normal. Further investigation revealed elevated carcinoembryonic antigen (CEA) >500 ng/mL. Esophagogastroduodenoscopy (EG D) did not reveal any gross lesion in the stomach but depigmented areas were seen in the anastomosis line (Figure 1). Endoscopic biopsies were obtained from existing depigmented areas. The histopathology of the anastomotic area revealed poorly differentiated adenocarcinoma (Figure 2). The patient was referred to surgery clinic for the availability of operation.

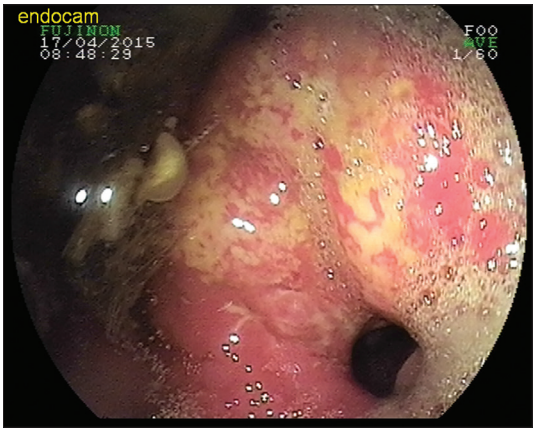

FIGURE 1. Endoscopic unusual appearance remnant gastric adenocarcinoma

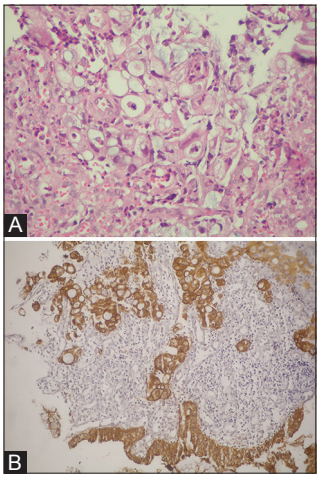

FIGURE 2. (A) Glands that show prominent cytological atypia within inflammatory exudate and the histopathological examination findings observed with regenerative epithelial change (Hematoxylin-eosin staining; x 40). (B) The immunohistochemical examination with pancytokeratin

DISCUSSION

Gastric stump cancer (GSC), first described by Balfour in 1922 (9), is defined as a carcinoma occurring in the gastric remnant after partial gastric resection for peptic ulcer disease.

Cancer of the gastric stump is a well-known event after distal gastrectomy for benign peptic ulcer. Previous reports show gastric cancer in remnant stomach may be associated with the lower acidic environment in the gastric stump, duodenogastric reflux, Helicobacter pylori infection and Billroth II reconstruction (10).

In comparison to GSC after surgery for benign disease, carcinomas in the gastric stump occurring after surgery for malignant disease are thought to have a different mechanism of carcinogenesis. Matsui et al. divided their patients with GSC into three groups. The first group consisted of patients following

surgery for benign disease, and the gastroduodenal reflux after Billroth-II reconstruction may lead to development of carcinoma. In the second group with a time interval of > 10 years and surgery after malignant disease, a genetic factor such as p53 may be related to metachronous multiple carcinogenesis. In the last group with a time interval of < 10 years, metachronous multiple carcinogenesis might be associated with diffuse intestinal metaplasia in the mucosa (11).

Gastric stump cancer usually occurs 20-30 years after gastrectomy and rarely < 10 years following the surgery. Early gastric stump cancer has a male preponderance, and the majority of lesions are found at the anastomotic site or at the lesser curvature of the stomach (12). The macroscopic appearance of gastric stump cancer and its classification system is the same as gastric cancers. Based on this situation, gastric stump cancers can be polypoid, fungating, ulcerated and diffusely infiltrating tumors respectively. Surveillance with endoscopy and multiple biopsies is the only way to diagnose tumors that are at an early stage and thus susceptible to surgical treatment with an excellent chance of overall good results and prognosis. In our case, the appearance of adenocarcinoma was quite different from that described in the classification system.

CONCLUSION

Gastric cancers, especially gastric stump cancers may have different appearances. Therefore a careful endoscopic examination and received biopsies are of paramount importance.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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