Two Cases of Cancer in the Remnant Stomach Derived from Gastritis Cystica Polyposa

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Summary: We have recently encountered two patients with early gastric cancer in the remnant stomach which resulted from gastritis cystica polyposa at the anastomosis site. The remnant stomach, which had been reconstructed with the Billroth II method, contained an elevated sessile lesion at the anastomosis site. One patient was a 73-year-old woman who had undergone gastrectomy for a gastric ulcer at 30 years earlier, cancer type I+IIa of the remnant stomach was diagnosed, and total remnant gastrectomy was performed. The other patient was a 59-year-old man who had undergone gastrectomy for a duodenal ulcer at 31 years earlier, cancer type I+IIa of the remnant stomach was diagnosed, and subtotal remnant gastrectomy was performed. Histological examination in each case showed that moderately differentiated adenocarcinoma had developed from gastritis cystica polyposa. These results suggested that this cancer has a close relationship with gastritis cystica polyposa.

Key words gastritis cystica polyposa, cancer in the remnant stomach

INTRODUCTION

Littler and Gleibermann [1] first reported gastritis cystica polyposa (GCP) as a sessile polypoid lesion that occurred at the site of gastroenteric anastomosis. GCP is an interesting gastric lesion occurring after a relatively long latent period. Recently, GCP was considered to be a precancerous lesion at the anastomosis site of the remnant stomach. Here, we presented two cases with early gastric cancer in the remnant stomach which resulted from GCP at the anastomosis site.

CASE REPORT

Case 1

A 73-year-old woman who had undergone gastrectomy for a gastric ulcer at 30 years earlier presented an abnormality in the remnant stomach on a routine screening examination. The patient was referred to Kurume University Hospital for further examination on August 3, 1994. Gastrography showed the remnant stomach had earlier been reconstructed with the Billroth II method, and showed an irregular-shaped elevated lesion with nodular change, 4.5×7.2 cm in size, at the greater curvature of the anastomosis site (Fig. 1). Upper gastrointestinal endoscopic examination showed a reddish irregular-shaped elevated lesion with nodular change (Fig. 2). The pathological diagnosis based on a biopsy specimen was poorly differentiated adenocarcinoma. The operative procedure was total remnant gastrectomy, splenectomy, and ρ-Roux-en-Y reconstruction. Intraoperative findings confirmed that the remnant stomach had been reconstructed with the Billroth II method, and no metastasis was recognized in the lymph nodes, liver or peritoneum. The surgical diagnosis was remnant stomach cancer type 0 I+IIa, and H0, P0, N0, T1 Stage IA. The macroscopic
findings of the resected specimen were an irregular-shaped elevated lesion 3.5×5.5 cm in size in continuity with a nodular sessile polypoid lesion on the greater curvature on the anastomosis site (Fig. 3). The histological findings showed hyperplastic mucosa with cystic pseudopyloric gland (Fig. 4). In many areas, hypertrophic muscularis mucosae were penetrated by gastric glands, which infiltrated widely in the underlying submucosa. (H & E, ×40)
penetrated by gastric glands, which infiltrated widely in the underlying submucosa (Fig. 5). Proliferation of moderately differentiated adenocarcinoma was recognized in the superficial layer of sessile polypoid lesions (Fig. 6). Moderately to poorly differentiated adenocarcinoma invaded the superficial submucosa (Fig. 7). These clinical and pathological features suggested that this case was early gastric cancer of the remnant stomach which resulted from GCP at the anastomosis site.

Case 2

A 59-year-old man who had undergone gastrectomy for a duodenal ulcer at 31 years earlier visited a private hospital for a routine screening examination. Cancer of the remnant stomach was diagnosed based on gastrography and endoscopy. The patient was referred to Kurume University Hospital for further examination and treatment on June 17, 1996. Gastrography showed the remnant stomach had been reconstructed with the Billroth II method, and showed several nodular elevated lesions at the anastomosis site (Fig. 8). Upper gastrointestinal endoscopic examination showed several reddish flat elevated lesions with nodular change on the lesser curvature, the posterior wall, and on the greater curvature on the anastomosis site (Fig. 9). The pathological diagnosis based on a biopsy specimen was moderately differentiated tubular adenocarcinoma. The operative procedure was subtotal remnant gastrectomy, and Roux-en-Y reconstruction. The intraoperative findings confirmed that the remnant stomach had been reconstructed with Billroth II method, and no metastasis was recognized in the lymph nodes, liver or peritoneum. The surgical diagnosis was remnant stomach cancer type 0 I+IIa, and H0, P0, N0, T1 Stage IA. The macroscopic findings of the resected specimen were an irregular-shaped elevated lesion 11.2×3.2 cm in size in continuity.
with a nodular sessile polypoid lesion at the whole circumference of the anastomosis site (Fig. 10). The histological findings showed hyperplastic mucosa with cystic pseudopyloric gland (Fig. 11). In some areas, hypertrophic muscularis mucosae were penetrated by gastric glands, which infiltrated widely in the underlying submucosa. Proliferation of moder-
ately to well differentiated adenocarcinoma was recognized in the superficial layer of sessile polypoid lesions (Fig. 12). Moderately to well differentiated adenocarcinoma invaded the middle layer of submucosa (Fig. 13). These clinical and pathological features suggested that this case was early gastric cancer of the remnant stomach which resulted from GCP at the anastomosis site, too.

DISCUSSION

Littler and Gleibermann [1] reported GCP which was a polypoid gastric lesion occurring at the gastroenteric anastomosis of the remnant stomach, in 1972. In Japan, Koga et al. [2] named the polypoid gastric lesion at the gastroenterostomy site as stomal polypoid hypertrophic gastritis (SPHG), in 1979. The morphological feature of GCP was sessile polypoid lesion macroscopically, and hyperplasia of the foveolar gland, cystic pseudopyloric gland and the gland invading the submucosa, histologically [1, 2]. Polypoid lesions at the anastomosis site which have the morphological features of GCP, and differentiated histological type adenocarcinoma invading the submucosa recognized in continuity with these polypoid lesions were both present in our two cases. So, these two cases were considered to be early gastric cancer in the remnant stomach which had developed from GCP. So far, 27 cases of cancer in the remnant stomach derived from GCP including our cases have been reported in Japan [3-11]. Twenty-two cases of these reported cases were of early gastric cancer, because GCP was detected easily as a broad polypoid lesion at the anastomosis site on gastrography or endoscopy, so cancer of the remnant stomach derived from GCP was detected in the early stage. Twenty-five of these reported cases had been reconstructed by the Billroth II method. The cancer-free interval after the first operation in these reported cases ranged from 14 to 39 years. The reflux of duodenal juice into the gastric mucosa at the gastroenteric anastomosis over a long period was considered to be the cause for the GCP, as in cancer at the anastomosis site of the remnant stomach [5, 12]. Wada [12] reported that GCP resulted from destruction in the tissue of the gastric mucosa at the anastomosis site by repeated reflux of duodenal juice. We reported that hyperplasia of the foveolar gland in GCP had high proliferative activity using the AgNOR method [13]. Fukuchi et al. [4] suggested that hyperplasia of the foveolar gland in GCP was a precancerous lesion of cancer at the anastomosis site of the remnant stomach. In our two cases, proliferation of cancer cells were recognized in the superficial layer of the hyperplastic mucosa of the GCP in many areas. Finally, the origin of the GCP was considered to be overreaction to the reflux of the duodenal juice. Hyperplasia of the foveolar gland of the GCP had high proliferative activity. So, this hyperplasia was an important morphological change in the development of the precancerous lesion at the anastomosis site in the remnant stomach.

REFERENCES

