

SYNCHRONOUS DOUBLE CARCINOMAS OF THE ESOPHAGUS AND THE REMNANT STOMACH: A CASE REPORT

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A 56-year-old man with esophageal squamous carcinoma was found to have additional adenocarcinoma in the remnant stomach on the esophageal operation. He had undergone partial gastrectomy for gastric ulcer 30 years ago. He underwent transthoracic esophagectomy for esophageal carcinoma and remnant stomach resection for the remnant stomach carcinoma. After the course of supportive therapy, he succumbed to tumor recurrences 16 months after the operation. This is the first case of synchronous double carcinomas of the esophagus and the remnant stomach.

The rate of double carcinomas of the esophagus and other organs were reported to be 2.1% for synchronous lesions and 1.5% for metachronous. According to Abo *et al.* (1), the most frequent second organ associated with esophageal cancer is stomach and comprises 76.5% of synchronous lesions and 37% of metachronous, respectively. Interestingly, no case of synchronous double carcinomas of the esophagus and the remnant stomach has been reported.

CASE REPORT

A 56-year-old Japanese man complained of dysphagia for a month. He had undergone partial gastrectomy for gastric ulcer at the age of 26, and right lower pulmonary lobectomy for right lung abscess at 27. He appeared well nourished, but hemoglobin level (Hb) was low (11.3g/dl). Carcinoembryonic antigen (CEA) was 6ng/ml. Other laboratory data were within normal limits.

Esophagogram showed a 3 type stenosis. 8.0cm in length, in the lower thoracic esophagus (EiEa) (2). Insufficient amount of barium passed downward for the stenosis and the evaluation of the remnant stomach was inadequate. By endoscopy, a circular stenosis with irregular and erosive surface was seen at 37cm distal to the dental arch. Further insertion of the endoscope was impossible. Biopsy specimens showed epidermoid carcinoma. No enlarged lymph nodes nor organ metastases was found by computed tomography and celiac angiography.

Total thoracic esophagectomy through the right thoracotomy was performed. In the abdomen unexpectedly, a hard tumor, 4×2cm in size, was palpated at the posterior wall of gastrojejunostomy on the

stomach and two mesenteric lymph nodes were palpable. Resection of the remnant stomach, splenectomy and extirpation of the two swollen mesenteric lymph nodes were performed (Fig. 1). For the esophageal conduit, the left colon was interposed between the cervical esophagus and the Roux-en-Y limb of the jejunum through an antethoracic route (2-3).

Histologically, the esophageal tumor was a well differentiated epidermoid carcinoma with cancer-pearl (Fig. 2), definite invasion to the adventitia (a₂), and



Fig.1 Resected specimen

An ulcerative type tumor, 5.5×3.5cm in size, was observed at the lower esophagus and a Borrmann 3 type tumor, 5.0×3.0cm in size, at the stoma of the remnant stomach.



Fig.2 Histology of a well differentiated epidermoid carcinoma of the esophagus (H.E., ×12)

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Fig.3 Histology of a poorly differentiated adenocarcinoma of the remnant stomach (H.E., $\times 33$)

without lymph nodes metastasis (n_0). The remnant stomach tumor proved to be a poorly differentiated adenocarcinoma (Fig. 3) invading subserosa (ss) with metastasis in the mesenteric lymph nodes (2-3).

Local recurrence appeared in the lower mediastinum 10 months after the operation. After the course of supportive therapy, he succumbed to pneumonia 16 months after the operation. The autopsy revealed mediastinal recurrence of the epidermoid carcinoma, and liver and abdominal lymph node metastasis of the adenocarcinoma.

DISCUSSION

This is a case of double carcinomas of the esophagus and the remnant stomach satisfying the criteria of multiple primary cancers by Warren and Gates (4).

Abo *et al.* (1) reported the incidence of double carcinomas of the esophagus and other miscellaneous organs. It was 2.1% for synchronous and 1.5% for metachronous carcinomas. As an organ of synchronous carcinoma, the stomach was the most common (76.5%), followed by lung (5.4%), tongue and oral cavity (3.3%), colon, rectum, gallbladder, and pancreas (1.7% respectively). As a site of metachronous lesion, the stomach was also the most common (37%), followed by larynx (14%), tongue and oral cavity (11%), small pelvic organs (8.9%), colon and rectum (8.3%), and breast (6%). While gastric carcinoma is the most frequent secondary carcinoma, double carcinomas of the esophagus and the remnant stomach have not been reported.

The incidence of the esophageal carcinoma developing after gastrectomy was reported to be 1.5-9.3% (5-7). In our 115 cases of primary esophageal carcinoma, the incidence of previous gastric resection was 10.4%. According to Nakayama *et al.* (8) among 224 cases of esophageal carcinoma developing after partial gastrectomy, the interval between gastric operation and diagnosis of the esophageal carcinoma was 126 ± 6.4 months: in case of gastrectomy for carcinoma it was 60 ± 8 months and in case of gastrectomy for the benign disease it was 72 ± 7 months. The diseases for gastrectomy were as follow: gastric and/or duodenal ulcers in 74.1%, gastric carcinoma in 20.5%. The

organs applied for reconstruction were as follow: colon in 72.2%, jejunum in 24.4%, remnant stomach in 2.8% and skin flap in 0.6%. It is often impossible to use the stomach as esophageal conduit in case of the double carcinomas of the esophagus and the remnant stomach.

It is often experienced that the gastric fluoroscopic and endoscopic examinations are hampered due to the stenosis in the esophagus, making some of the gastric lesions unrecognized preoperatively (9). In Japan the stomach is most frequently utilized for reconstruction after esophagectomy, and the importance of careful intraoperative palpation of the stomach in such a case is obvious.

Carcinogenesis of esophageal carcinoma as well as that of remnant stomach carcinoma after gastrectomy are not known exactly. Several hypotheses proposed are: 1) reflux of bile (10) or gastric juice (6); 2) malnutrition originated from gastrectomy (11); 3) motor disturbance after vagotomy (12); 4) metabolic change (12). It is difficult to ascribe one particular cause to this single case. To assume a chance of occurrence would seem more reasonable.

The association between the esophageal carcinoma and the synchronous carcinoma in other organs is not uncommon. When the examination of the stomach was inadequate due to the poor passage of barium through the esophagus, the possibility of overlooked lesion should always be kept in mind, and in such a case, careful intraoperative palpation of the stomach is obvious and the colon should be prepared by laxatives and antibiotics for potential use as an esophageal substitution.

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