

CASE REPORT

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Incidentally Detected Gastric Cancer in Pancreaticoduodenectomy Specimen

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ABSTRACT The incidence of synchronous pancreatic carcinoma with another carcinoma varies between 1.2% and 20%. Synchronous incidence of pancreatic cancer and stomach cancer is quite low. In our study, a 63-year-old male patient was admitted to our clinic with complaints of fatigue, weight loss and jaundice. In contrast-enhanced abdominal tomography, a lesion with malignant radiological features was observed in the head of the pancreas. Signet-ring cell gastric cancer was found incidentally in the antrum of the stomach in the pathology specimen. Thereupon, a complementary total gastrectomy operation was performed on the patient. Coexistence of gastric and pancreatic cancer is a clinically serious condition. However, surgery can be curative in completely resectable tumors.

Keywords: Pancreaticoduodenectomy; pancreatic neoplasms; stomach neoplasms

The improvements in the prognosis of cancer patients in recent years have led to an increase in the incidence of second primary cancer and multiple primary cancer.¹ In addition, the technical development of radiological methods, nuclear medicine methods and endoscopic interventions in recent years has also increased the possibility of detecting second primary cancer.² These factors, which caused the prognosis of pancreatic cancer patients to improve over time, increased the expected survival. It has also increased the incidence of synchronous and metachronous malignancies.³ In addition, it is predicted that the incidence of synchronous or metachronous multiple primary malignancies will increase with the increased survival and aging of the general population.^{4,5}

CASE REPORT

A 63-year-old male patient was admitted to our clinic with complaints of abdominal pain, nausea, weakness, jaundice and weight loss. Anemia (Hgb: 9.8 g/dL), hyperbilirubinemia (total: 5.03 direct: 2.87 mg/dL) were detected. Carcinoembryonic antigen was 1.5 ng/mL (normal range 0-5 ng/mL) and carbohydrate antigen was 19-9 43.8 U/mL (normal range 0-27 U/mL).

Contrast-enhanced abdominal tomography revealed a 20x15 mm malignant lesion in the head of the pancreas. No finding suggesting distant organ metastasis was observed. Pancreaticoduodenectomy, wirsungojejunostomy, hepaticojejunostomy and gastroenterostomy were performed on the patient (Figure

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1a). In the postoperative period, the patient had bile colored drainage with high amylase level from the abdominal drain. The patient was evaluated nonoperatively. The patient, who had no drainage on the postoperative 15th day, was discharged after oral nutrition was initiated. In the postoperative follow-up, pathological examination was reported as a moderately differentiated pancreatic adenocarcinoma. In addition, a signet-ring cell gastric cancer was detected incidentally in the antrum of the stomach, which was included in the specimen. A metastatic lymph node that was removed by the greater curvature of the stomach was detected. No tumor was observed in the macroscopic examination of the specimen, and carcinoma was detected in the microscopic examination (Figure 2a, Figure 2b, Figure 2c). Thereupon, the patient was hospitalized again for a complementary total gastrectomy operation. Subsequently, the patient underwent complementary total gastrectomy, end-to-side esophagojejunostomy and Roux-Y jejunojunctionostomy (Figure 1b). No complications occurred in the postoperative period. The patient was discharged on the 10th postoperative day. Pathological examination of the complementary total gastrectomy specimen was reported as follows; the mucosa was flattened in an area of 6.5x2 cm at the junction of the small curvature of the anterior-posterior wall of the stomach, a signet-cell gastric cancer was detected in an area of 1.9 cm limited to the mucosa. Thereupon, the patient was directed to the medical oncology clinic. Chemotherapy treatment was started.

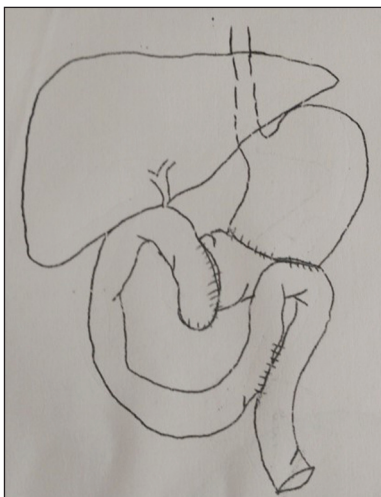


FIGURE 1a: Reconstruction after pancreaticoduodenectomy.

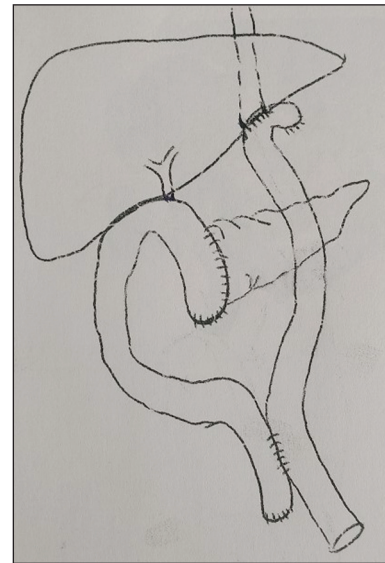


FIGURE 1b: Roux-Y reconstruction of gastrectomy completed in total due to gastric carcinoma detected in pancreaticoduodenectomy specimen.

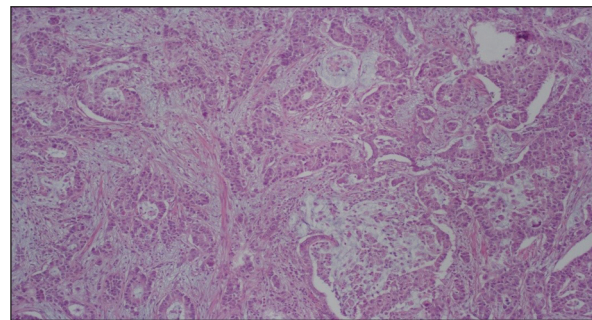


FIGURE 2a: Adenocarcinoma with mucinous differentiation (H&E, x10).

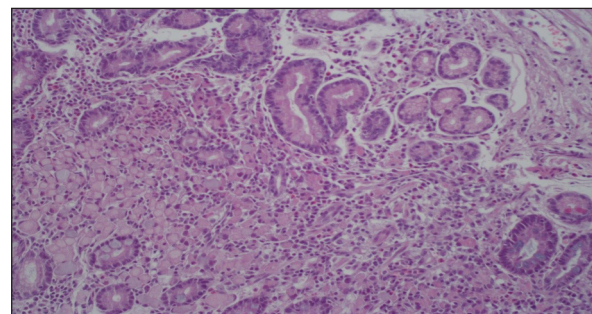


FIGURE 2b: Signet ring cell carcinoma infiltration and intestinal metaplasia in the lamina propria of the stomach (H&E, x10).

The patient is now in the 6th month of the postoperative period and follow-up continues without any problem.

Consent was obtained from the patient for the study.

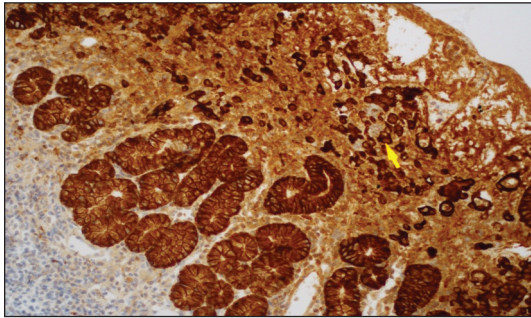


FIGURE 2c: Signet ring cells stained positively with keratin in the stomach (Keratin x20).

DISCUSSION

The prevalence of multiple primary carcinoma has been reported to be 0.73% to 11.7% in the literature data including approximately one million cancer patients.⁶ Synchronous cancer cases of the gastrointestinal system have been frequently reported. However, cases of synchronous cancer of the second primary gastrointestinal system together with pancreatic cancer are relatively rare.¹ Synchronous primary malignancies can cause wrong evaluations, represent a special and difficult situation as it can lead to therapeutic decisions in wrong way.² The incidence of pancreatic cancer being synchronous with another cancer has been reported between 1.2% and 20%.⁶ The rate of synchronous pancreatic cancer and gastric cancer is very low.^{6,7} The prevalence of synchronous tumors in patients with gastric carcinoma ranges from 2.8% to 6.8%. The incidence of pancreatic cancer seen with gastric cancer corresponds to 3.8% of all cancers that are synchronous with gastric carcinoma.⁷

Further application of diagnostic modalities, including computed tomography, magnetic resonance imaging, and endoscopic ultrasound-guided fine-needle aspiration cytology or biopsy, has led to more frequent detection of pancreatic cancer and other malignancies.⁸ Intraoperative exploration and, when necessary, intraoperative ultrasonography is very valuable as well as the importance of preoperative evaluation in detecting synchronous tumors.⁹

In the case presented in this study, in the pathological examination of the specimen of the patient who underwent pancreaticoduodenectomy for pancreatic head cancer, incidentally signet ring cell gastric ade-

nocarcinoma was found in the antrum. In this case, although upper gastrointestinal system endoscopy was performed in the preoperative period, sometimes early stage gastric cancers cannot be seen macroscopically on endoscopy. It is understood from this case that each part of the specimen sent to pathology should be carefully examined macroscopically and microscopically. When the literature is reviewed, there are studies showing the association of pancreatic and gastric cancer in preoperative imaging or intraoperative abdominal exploration. However, similar to the case presented in this study, an incidentally detected gastric cancer case in the pancreaticoduodenectomy specimen has not been reported in the literature. In the study conducted by Bang Wool Eom et al., synchronous or metachronous second primary cancer was detected in 159 (3.4%) of 4,593 gastric cancer patients. Ten out of 159 patients had pancreatic cancer, 7 of them were synchronous and 3 of them were metachronous.¹⁰ In the study conducted by Tae Kyung Ha et al., 96 (1%) of 10,090 gastric cancer patients were found to have synchronous cancer, 8 of which were pancreatic cancer.¹¹

In the study conducted by Ławniczak et al, 23 synchronous second primary cancer was detected in 862 gastric cancer patients, and no pancreatic cancer was found.¹²

Surgical resection continues to be a potentially curative treatment for gastric and pancreatic adenocarcinoma.^{7,13} Pancreaticoduodenectomy is a relatively high-risk surgical procedure with a 20.8-68.2% morbidity rate and 0-7.1% mortality rate.¹⁴ Long survival is rare in patients operated on for pancreatic cancer.^{6,7} Despite the patient's advanced age and synchronous cancer of the pancreas, surgical intervention is thought to be an option to extend the patient's life and improve the quality of life.^{7,15} The most aggressive cancer determines the prognosis in patients with synchronous cancers.⁶ Although synchronous gastric and pancreatic cancer is known to be a clinically serious condition, surgery is a curative treatment in resectable tumors.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Murat Ulaş; **Design:** Murat Ulaş, Ahmet Karayiğit; **Control/Supervision:** Murat Ulaş; **Data Collection and/or Processing:** Evrim Yılmaz, Dursun Burak Özdemir, İhsan Burak Karakaya; **Analysis and/or Interpretation:** Ahmet Karayiğit, Murat Ulaş; **Literature Review:** Ahmet Karayiğit, Dursun Burak Özdemir, İhsan Burak Karakaya; **Writing the Article:** Ahmet Karayiğit, Dursun Burak Özdemir, Murat Ulaş; **Critical Review:** Murat Ulaş.

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