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Curative distal pancreatectomy in patients with acinar cell carcinoma of pancreas diagnosed by endoscopic aspiration via esophago-jejunostomy: A successful case report

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ABSTRACT

INTRODUCTION: This is a case report on the advances in preoperative endoscopic-guided fine-needle-aspiration (FNA) diagnosis for pancreatic carcinoma to achieve a curative operation even in patients who have a history of total gastrectomy.
CASE PRESENTATION: A 65-year-old man, who underwent total gastrectomy for gastric cancer 13 years ago, had discomfort in the left lateral abdomen. A 3-cm hypovascular mass accompanying a large distal pseudocyst in the pancreatic tail was observed on computed tomography. Endoscopic ultrasonography via elevation of the jejunal loop on esophago-jejunostomy also revealed similar lesions, and FNA for the proximal-side hypoechoic mass was successful. The cytological diagnosis with immunohistochemistry was acinar cell carcinoma of the pancreas. Distal pancreatectomy with splenectomy was successfully performed. Histology of the resected specimen also showed the acinar cell carcinoma, similar with pre-operative cytology, which involved the splenic vein and had extra-pancreatic extension but no lymph node metastasis. The tumor stage was IIA by the 2009 UICC classification. He had no tumor relapse on imaging follow-up until 12 months after the operation.
DISCUSSION: There have been marked technical advancements in endoscopic ultrasonography-guided diagnosis, including FNA, even in patients with prior digestive tract surgery. However, the risk of complication is still a concern. Accurate histological diagnosis is useful in the field of pancreatic surgery, especially in cases of rare or small malignant lesions.
CONCLUSION: Curative pancreatectomy was possible in a case of acinar cell carcinoma, a rare pancreatic malignancy, which was diagnosed by preoperative endoscopic FNA diagnosis via esophago-jejunostomy after previous total gastrectomy.

1. Introduction

Acinar cell carcinoma of the pancreas (ACC) is relatively rare malignancy representing approximately 1% in the pancreatic malignancies [1,2], and majority occur in the pancreatic head [3]. ACC was often found as a large pancreatic mass lesion with symtomps and the preoperatively accurate diagnosis by only abdominal imaging examinations might be difficult [4]. Complete pancreatectomy is required to obtain possibility for longer survival and ACC has been usually diagnosed by the resected specimen [5]. On the other hand, the multiple primary malignancies are often found since the cancer-survivors by effective treatments has been increased nowadays [6] and the prior abdominal surgery may affect the difficulty of preoperative diagnosis and operation itself by adhesion or complicated intestinal reconstructions. We herein report a case undergoing curative pancreatectomy for ACC who had a prior total gastrectomy and could be histologically diagnosed by the preoperative endoscopic examinations.

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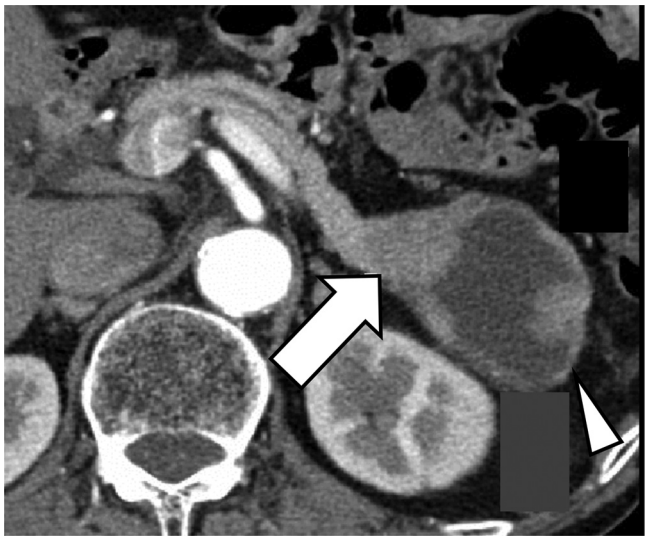

Fig. 1. Arterial-portal phase of the contrast CT. (a) White arrow showed a hypovascular irregular mass of pancreas; white arrowhead showed cystic lesion adjacent to solid mass revealed hematoma at the pancreatic tail.

2. Case presentation

A 65-year-old man had a discomfort on the left lateral abdomen and the pancreatic mass lesion was suspected. In the past history, he underwent total gastrectomy for gastric cancer and the esophagojejunostomy reconstruction was performed 13 year ago and had no tumor relapse so far. He also underwent right mastectomy for male breast cancer one year ago and, therefore, this patient had triple cancer but no history of environmental episodes in occupation. Family history did not reveal history of pancreatic cancer. He was referred to the our department for further examination and surgical treatment.

Laboratory data showed a hyperglycemia otherwise normal. Tumor markers were limited in normal range as; carcinoembryonic antigen was 5.9 ng/mL, CA19-9 12.6 U/mL, DUPAN2 170 U/mL, SPAN-1 35 U/mL and squamous cell carcinoma antigen 1.1 ng/mL

A physical examination showed no abnormalities but only the operative scar. Abdominal computed tomography (CT) using contrast media revealed a 3cm-in-size of hypovascular mass lesion accompanied with a 6.5cm-in-size of pseudocyst at the distal side in the pancreatic tail (Fig. 1). Endoscopic ultrasonography (EUS) also showed the pancreatic lesions, which were detected via elevated jejunal loop of esophago-jejunostomy. The 3cm-in-size of irregular hypoechoic mass lesion was observed in the pancreas tail and the pancreatic cancer was suspected and the 6.5 cm-in-size of cystic mass lesion adjacent to solid mass was also detected (Fig. 2). As it seemed to be closed to jejunal loop, the fine needle aspiration (FNA) was attempted for hypoechoic solid mass lesion at the proximal-side (Fig. 2). The enough specimen could be obtained and cytological diagnosis showed acinar cell carcinoma of the pancreas, which showed a plenty of cells with tubular proliferation of eosinophilic or basophilic cuboidal tumor cells with increased oval nuclei with high nuclear/cytoplasm (N/C) ratio, hyper-chromatin condensation and scattered mitosis (Fig. 3a and b). Immunohistocheistry examination revealed the positive expression of BCL10 and trypsin at cytoplasmic membrane (Fig. 3c and d), and negative expression of synaptophysin and chromogranin A (as markers for neuroendocrine neoplasm). By these results, the solid mass was diagnosed as the acinar cell carcinomas (ACC) of pancreas. Extension of pancreas cancer, node metastasis and distant metastasis were not remarkable by CT and magnetic resonance (MR). The positron-emission tomography (PET) showed high accumulation of 18-fluorodeoxy-glucose (FDG) at the solid mass lesion (Fig. 4), otherwise no accumulation at cystic pancreatic mass and other lesions systemically.

The curative operation was supposed to be possible and the distal pancreatectomy was scheduled. Under the upper median incision along the operative scar, we dissected the postoperative severe adhesion and the pancreatic body and tail could be isolated from the mesentery of jejunal loop without injury of intestine and its vessels. After ligation of splenic artery, the pancreas body was transected at the site of superior mesenteric vein. Blood loss was 480 mL and operating time was 329 min. The distal pancreatectomy with splenectomy and surrounding node dissections were successfully accomplished without any trouble during operation. However, hypovolemic shock with anemia was observed at day 1 and the blood coagulation test revealed the suspicious thrombosis at day 7. The general conditions and blood test results gradually improved until day 20. He was transferred to the follow-up hospital.

The pathological diagnosis of resected specimen showed a 2.7 cm-in-size of nodular mass lesion and adjacent cystic lesion (Fig. 5) and the cystic lesion was just pseudocyst. The solid mass also revealed ACC as well as specimen by FNA, and the tumor component was observed in the main pancreatic duct and necrosis was not focally. Atypical epithelial cells with hyperchromatic nuclei, notable nucleoid and amphophilic to eosinophilic granular cytoplasm proliferate in acinar pattern. Partly, nest-like and trabecular patterns were noted. (Fig. 6a and b). Immunohistochemitry showed cancer cells with positive BCL-10, beta-catenin, trypsin, CK7 but negative for synaptophysin, CK8 and CK20. Cytoplasm showed the Periodic acid-Schiff stain (PAS)-positive granules. Acinar cell cancer was considered, eventually. The cancer extended to the surface of pancreatic parenchyma and adjacent splenic vein but no node

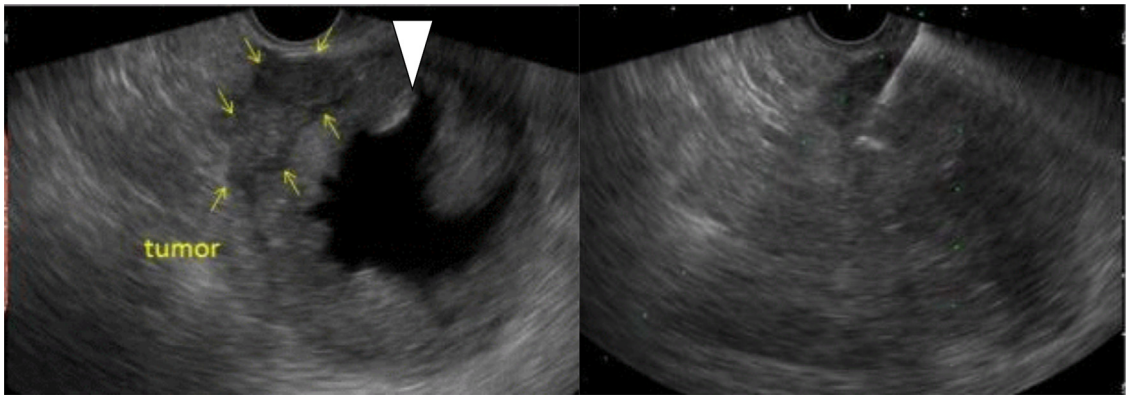

Fig. 2. EUS guided FNA. Arrow was 3cm-in-size of solid mass and arrow head was cystic lesion with thick wall.