Two Cases of Portal Annular Pancreas

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Portal annular pancreas is one of the pancreatic fusion anomalies in which the uncinate process of the pancreas extends to fuse with the dorsal pancreas by surrounding the portal vein (PV) or superior mesenteric vein (SMV). It is more common in the porcine pancreas, and is very rare in human. From a pancreatic surgeons’ point of view, a portal annular pancreas may influence the surgical procedure when dividing the neck of the pancreas, and can be potentially associated with postoperative pancreatic fistula because there are two pancreatic cut surfaces to manage when the pancreas needs to be divided at the level of the pancreatic neck portion. Here we present two consecutive patients with portal annular pancreas who underwent pancreaticoduodenectomy and subtotal distal pancreatectomy, respectively, and we discuss the clinical impact of this rare anomaly in certain types of pancreatectomy.

Key Words: Pancreas; Annular pancreas; Anomaly

INTRODUCTION

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CASE REPORTS

1. Case 1

A 71-year-old male patient presented with diarrhea for 6 months. Under physical examination, there was no specific finding. A routine chemistry test showed mild elevation of serum amylase (203 U/L; reference range, 30-115 U/L) and lipase (66 U/L; reference range, 5-60 U/L). An abdominal CT scan revealed intraductal papillary mucinous neoplasm (IPMN) in the head of the pancreas, and portal annular pancreas was incidentally noted (Fig. 2A). There was no definite solid portion in the cystic mass, but diffuse soft tissue infiltration was identified around superior mesenteric artery and celiac axis with suspicious invasive nature (Fig. 2A picture in picture). MRCP demonstrated the branch duct type IPMN of 3.8 cm in diameter. Serum CA 19-9 level was elevated (85.6 U/mL; reference range, 0.0-37.0). Therefore, the patient underwent pylorus-preserving pancreaticoduodenectomy. Suprasplenic vein type portal annular pancreas was indentified. After careful dissection of the pancreatic neck portion, the pancreatic neck was first divided. Then, the uncinate process of pancreas surrounding the PV was divided by endo-GIA for pancreatic head resection (Fig. 2B-D). The usual type of pancreaticojejunostomy, hepaticojejunostomy, and duodenoejunosotmy was performed. Postoperative pancreatic fistula (grade B) occurred, but was controlled by conservative management. He was able to go home on 49th postoperative day. Borderline malignancy IPMN without lymph node metastasis was reported upon the final pathologic examination.

2. Case 2

A 74-year-old female patient admitted with abdominal pain...