

Portal Annular Pancreas – A Rare Congenital Anomaly Not To Be Missed During Pancreatic Resections

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Background : Portal annular pancreas (PAP) or circumportal pancreas is a rare congenital anomaly in which portal vein and/or its tributaries are encased by pancreatic tissue. Its reported incidence is 0.8 – 2.5 %. It is classified into 3 types depending upon relation of main pancreatic duct to portal vein. This anomaly is often seen as an on table surprise and different options are advised for its management. We report 3 cases of PAP with different presentation.

Methods : Case 1 – 14 years old female, underwent open pancreatoduodenectomy for solid pseudopapillary epithelial neoplasm (SPEN) of pancreas. During uncinate process dissection portal annular pancreas type 3 was noted. In view of undilated pancreatic duct resection of PAP was deemed safe to achieve single pancreatic stump. Case 2 – 50 years old male, underwent laparoscopic pancreatoduodenectomy for periampullary carcinoma. Type 3 PAP was recognized on preoperative CECT and dissected out carefully. This patient had replaced right hepatic artery which posed a challenge during dissection. Case 3 – 56 years old male, underwent open pancreatoduodenectomy for pancreatic head carcinoma. Here also type 3 PAP was recognized on preoperative CECT. The surgery was technically challenging due to pancreatitis and recurrent cholangitis along with vascular anomaly. With careful dissection the PAP was excised en bloc

Results : In all three cases the portal annular tissue was resected en bloc. Histopathology of all the three cases showed pancreatic tissue in the portal annular portion. In Case 3, tumor tissue was present in the PAP which underlined the importance of its resection. Case 1 and case 2 had uncomplicated postoperative course while case 3 had grade B POPF which was managed by per cutaneous drainage.

Conclusions : Although rarely reported, portal annular pancreas can pose technical challenges during pancreatic resections especially pancreatoduodenectomy. Reporting of this anomaly in a cross sectional imaging is recommended to avoid on table surprises. Effort should be made to resect the pancreatic tissue surrounding the portal vein or its tributaries as it leaves a single cut surface of pancreas and sometimes the portal annular tissue might harbor malignancy.

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