Patho Corner

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Case 1

A previously healthy 31-year-old female underwent computed tomography (CT) and magnetic resonance imaging (MRI) of the abdomen to evaluate for the acute onset of epigastric pain radiated to back which improved by proton pump inhibitor treatment. EUS showed a well-demarcated hypoechoic mass 3.5x2.7 cm. at pancreatic head area without lymph nodes involvement. Pancreatic duct was not dilated without evidence of vascular invasion. She underwent Whipple's operation. The pathological result reported tumor with pseudopapillary pattern formed by vascular cores composed of thin walled vessels with adherent uniform polygonal cells with rare mitotic figures. There are degenerative changes cause cystic structure with acellular or blood lakes contain red blood cells and occasionally cholesterol clefts and eosinophilic hyalin globules (Figure 1).

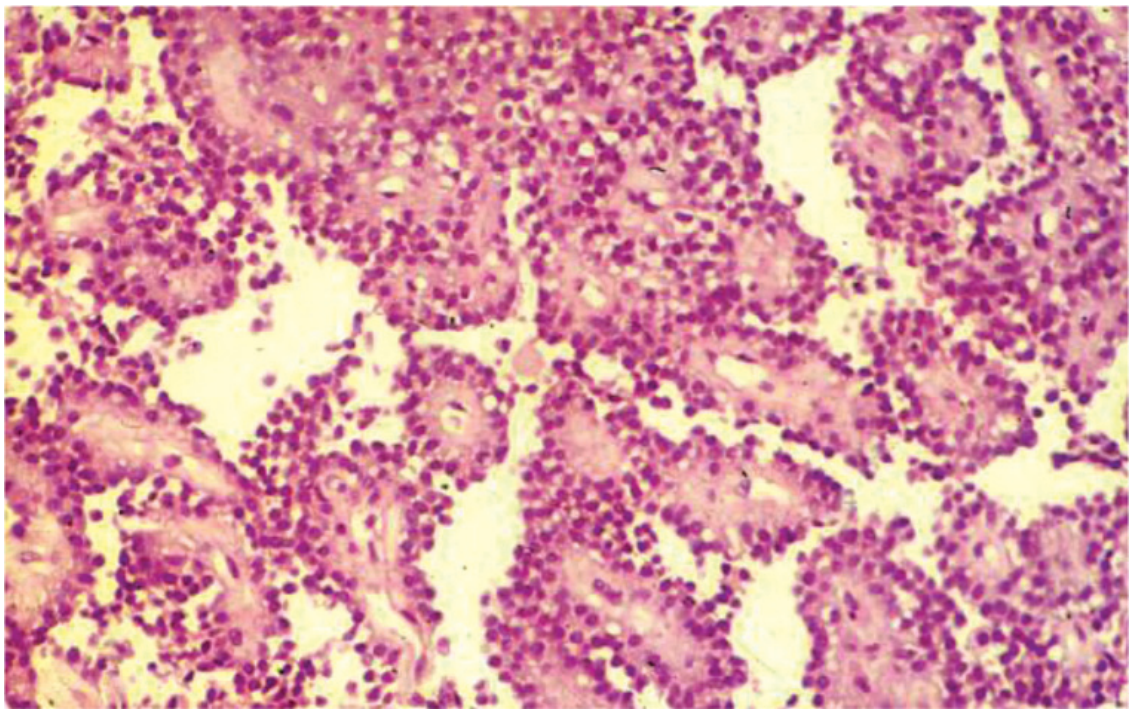

Figure 1.

What is the most likely diagnosis?

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Case 2

A 22-year-old man, presented with transient loss of consciousness and convulsion for several times. He had been brought to emergency rooms for several times. Plasma glucose in the emergency room was 22 mg/dL. He had improvement of symptoms immediately after intravenous glucose replacement. His C-peptide and insulin level were abnormally high without exogenous source. Family history was unremarkable. Physical examination was unremarkable. CT scan of the upper abdomen with pancreatic protocol was negative. EUS demonstrated a well-defined hypo-echoic mass measuring 11x18 mm in diameter at the head of pancreas. Fine needle aspiration (FNA) was performed. Preliminary cytopathology was consistent with round cells that were suspicious for neuroendocrine tumors. Pancreatico-duodenectomy (Whipple's operation) operation was performed. The mass was entirely and successfully removed during the operation. No immediate complication occurred. The final surgical pathology reported well-defined small round cell tumor with trabecular and alveolar patterns. There are scattered thin-walled vessels in the background with uniform nuclei, stipple chromatin, and finely granular cytoplasm (Figure 2-3).

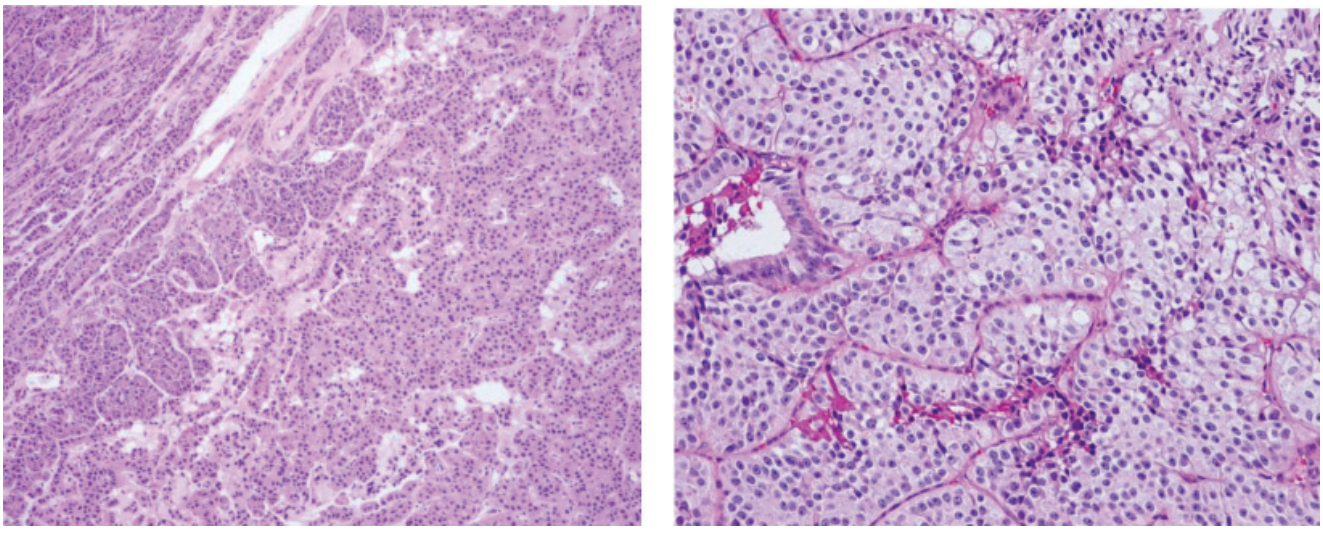

Figure 2-3.

What is the most likely diagnosis?

Case 3

An 81-year-old male presented with acute recurrent pancreatitis. CT scan of the abdomen showed dilatation of main pancreatic duct at the head and neck of pancreas. There was an abnormal papillary-like soft tissue projection along the pancreatic duct. Intraductal papillary mucinous neoplasm (IPMN) was suggested, resulting secondary pancreatitis and distal branch of splenic vein thrombosis. Endoscopic view revealed a typically "Patulous ampulla". EUS showed pancreatic cyst at the head and sized 3.8 cm, 1.8 cm respectively. The cyst was connected with main pancreatic duct. Pancreatic duct was markedly dilated and noted with septation and mural nodule along the main pancreatic duct. The surgical pathology reported main duct with epithelial proliferation covered by papillae with abundant mucous production (Figure 4).

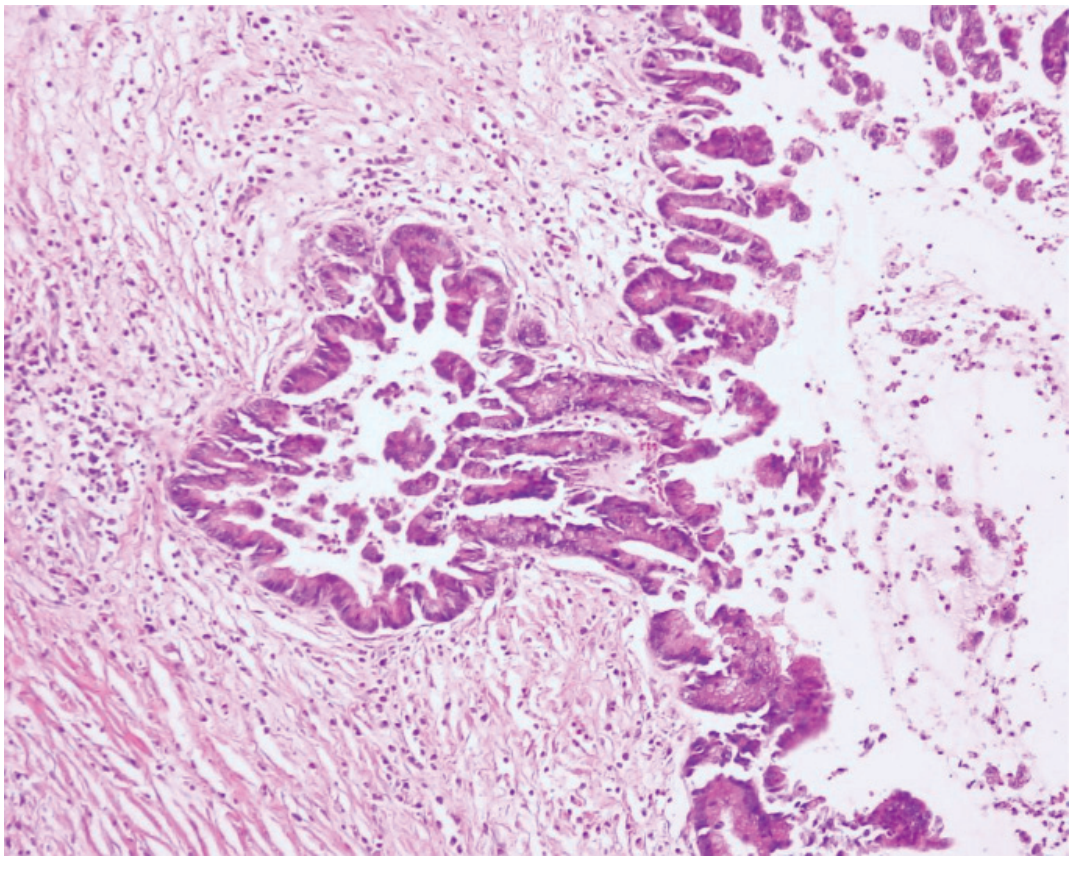

Figure 4.

What is the most likely diagnosis?

Answer for patho corner

Case 1 = Pseudopapillary neoplasm of the pancreas.
Case 2 = Well differentiate neuroendocrine tumors grade 1, most likely pancreatic insulinoma.
Case 3 = Intraductal papillary mucinous neoplasm of the pancreas (IPMN).