

Radiological Case Report: 'Solid and papillary epithelial neoplasm, a Case report'

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INTRODUCTION

Solid and papillary epithelial neoplasm (SPEN) of the pancreas is an uncommon low-grade malignant tumor. It is usually found in young women. We present a case of this rare pancreatic tumor diagnosed on CT scan examination.

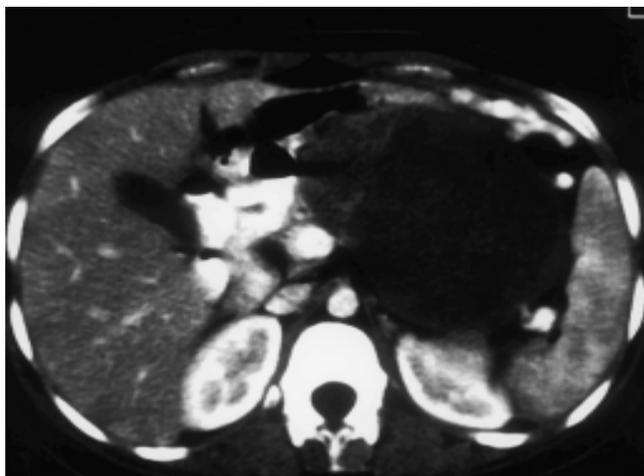


Fig 1

CASE REPORT

A 15 years female presented with complains of progressive abdominal discomfort and lump in abdomen since 6 months. There was no history of vomiting, severe abdominal pain or jaundice. We performed CT scan of abdomen on Hitachi CTW 2000 scanner after giving oral, per rectal and intravenous contrast. CT scan showed presence of a large well-defined well-encapsulated solid hypodense mass in body and tail of pancreas (Figure 1 and 2). There was clear preservation of fat plane between the mass and surrounding structures. Head of pancreas appeared normal (Figure 3). No evidence of lymphadenopathy or liver metastasis noted. We kept

the diagnosis of Solid and papillary epithelial neoplasm. Subsequently biopsy from the mass was performed, biopsy report was solid and papillary epithelial neoplasm. The patient was operated and the diagnosis was confirmed on histopathology examination.

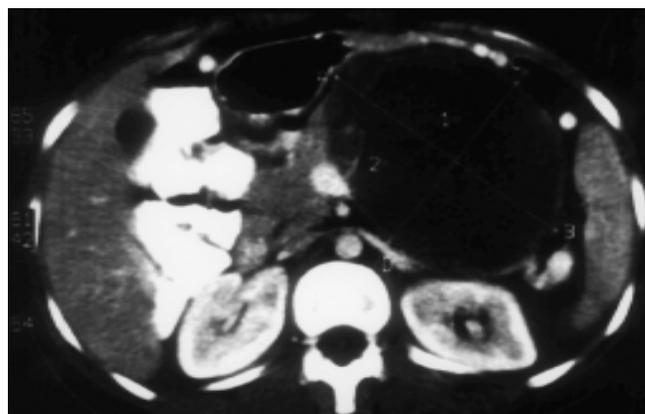


Fig 2

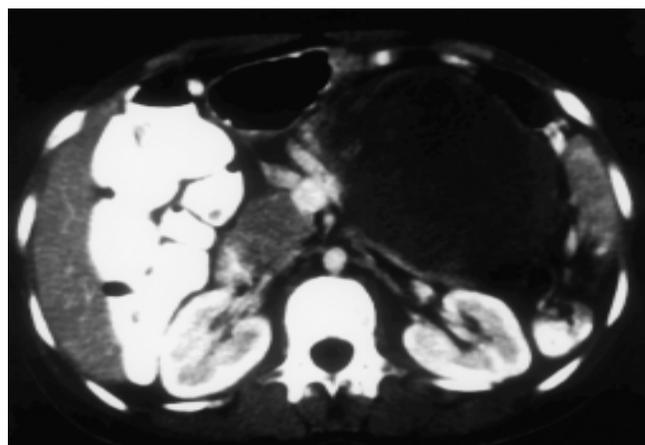


Fig 3

DISCUSSION

Solid and papillary neoplasm (SPEN, papillary carcinoma,

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papillary-cystic carcinoma) is an uncommon pancreatic tumor found chiefly in young females with a black racial predilection. The mean age is 24 years (range 10 to 50 years) and one third occur in adolescents. Presenting symptoms and signs are progressive abdominal discomfort, enlarging abdominal mass, frequently in left upper quadrant, early satiety, nausea and vomiting. Patient may also present with polyarthralgia or eosinophilia or both due to intravascular release of lipase (1). It is important to recognize SPEN since it is a low-grade malignancy that is apparently curable with surgical resection in most cases.

Grossly SPEN is a large (mean diameter 10 cm), well-encapsulated mass that usually demonstrates variable degrees of internal haemorrhage and cystic degeneration. These changes are secondary to the delicate, easily disrupted vascular network that traverses this tumor. Areas of hemorrhagic degeneration vary from solid friable areas to frankly cystic cavities. Microscopically, there is limited, if any, evidence of aggressive behavior consisting of capsular invasion, extension into adjacent parenchyma or vascular invasion. The neoplastic cells are small to medium in size, polygonal to somewhat elongated and slightly eosinophilic with small to medium sized ovoid nuclei. Mitotic figures are rare. Stains for mucin is negative.

Calcification is uncommon on plain films and CT but is peripheral when present (2). On ultrasonography, there is a well-demarcated echogenic mass with hypoechoic to anechoic areas of varying number and size depending on the degree of hemorrhage and necrosis. Through transmission is a constant feature in all cases in which internal cystic areas present. Many times septations are seen in tumor. Pathologically, there is no true 'septum' in this tumor. The sonographic features of septations in the cystic portion are possibly due to prominent papillae projecting into the space of cystic degeneration (3). CT shows a well-demarcated large pancreatic masses that are frequently in tail. The architecture of the mass varies from solid, homogenous muscle density, through mixed solid and cystic, to thick walled cyst, depending on the degree of hemorrhage and/or necrosis (4). In extreme instances of hemorrhage, both modalities well depict a thick-walled 'cyst' with a ragged inner margin. The CT numbers in the 'cysts' may be higher than water, correctly suggesting old blood and necrotic debris. The soft tissue attenuating portions of tumor demonstrate enhancement after administration of intravenous contrast. The lesion usually does not infiltrate into surrounding fat or organs

and lymphadenopathy or liver metastasis is usually not seen, however, liver metastasis and invasion into adjacent organs have been reported previously (5). Many times fluid-debris levels noted within the tumor that correspond to cystic and hemorrhagic areas. T1 and T2 weighted MR images show presence of heterogenous areas of increased signal intensity. Areas of high signal intensity on T1 weighted images correspond to areas of hemorrhagic debris. High signal intensity areas on T2 weighted images correspond to cystic areas and in hemorrhagic areas. The solid areas of tumor without gross hemorrhage demonstrate high signal intensity on T2 weighted images (2). Fluid-debris levels are also noted on MR images. Angiography generally shows a mildly vascular mass on celiac injections and a moderately vascular mass on super selective injections.

The differential diagnosis of SPEN includes microcystic adenoma, mucinous cystic neoplasm, nonfunctioning islet cell tumor, pleomorphic carcinoma of the pancreas, calcified hemorrhagic pseudocyst and pancreatoblastoma.

Although the imaging findings of SPEN are not specific, they are highly suggestive in the appropriate clinical setting. A large well-encapsulated mass that demonstrates calcification and regions of hemorrhagic degeneration seen in a young woman is virtually diagnostic.

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