Adenomatoid hyperplasia of pancreas presenting as tumor

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Adenomatoid hyperplasia belongs to the group of hyperplastic duct lesions of the pancreas. We report a 60-year-old man with adenomatoid hyperplasia of the pancreas, presenting as a mass lesion. The patient underwent pancreatico-duodenectomy uneventfully. The unusual location of the mass in the head of pancreas, the imaging and macroscopic appearance, dense fibrous stroma on histology, and prominent expression of p21ras protein point towards a distinct subtype. [Indian J Gastroenterol 2006;25:313-314]

Adenomatoid hyperplasia is a rare lesion of the pancreas belonging to the group of hyperplastic duct lesions. The diagnosis is based on histology since the lesions cannot be detected by imaging techniques. It may be an incidental finding in autopsy material and pancreatectomy specimens, while its biological behavior has not been elucidated.

A 60-year-old man, smoker, social consumer of alcohol, was admitted with one-week history of persistent, mild abdominal pain. Over the last 24 hours he developed fever, nausea and vomiting, while the pain became more intense with localization in the epigastrium. On examination, there was abdominal distention and epigastric tenderness. The liver extended 2 cm below the right costal margin. Rectal examination was normal and bowel sounds were absent. Laboratory tests revealed leukocytosis (16,000/µL), raised serum amylase (1920 U/L) and alkaline phosphatase (600 U/L), while bilirubin, transaminases and gamma-glutamyl transaminase levels were normal.

Ultrasoundography revealed a hypoechoic tumor lesion approximately 2.8 cm in diameter in the head of the pancreas. The pancreas was enlarged, and there was minimal free fluid in the peritoneal cavity. CT showed a 2.8 cm x 2.6 cm homogeneous hypodense lesion in the acinar process with no abnormality in the surrounding pancreatic parenchyma and liver. Endoscopic ultrasonography detected a complex heterogenous tumor with anechogenic spaces separated by echogenic solid septae. An attempt to take a biopsy was unsuccessful due to the anatomical location of the lesion and the danger of injury to the inferior vena cava. Tumors markers carcino-embryonic antigen, CA 19-9 and CA-125 were within normal levels. With a presumptive diagnosis of pancreatic neoplasm the patient underwent pancreatico-duodenectomy. The procedure was uncomplicated and the postoperative course uneventful. The patient has been followed up for 36 months without evidence of disease recurrence.

On gross inspection an ill-defined tumoral lesion measuring 2.8 cm x 2.5 cm x 2 cm was encountered in the head of the pancreas. Dissection revealed microcystic spaces in close association with whitish sclerotic areas measuring 1.5 cm in greatest diameter. In addition, a well demarcated compact lesion, 1 cm in diameter, was found within the papilla of Vater.

Histologically, the tumor was characterized by hyperplastic small and medium-sized pancreatic ducts, some of which were dilated and showed micropapillary hyperplasia. Coexistent findings were mucous cell hypertrophy, and hyperplastic ductules and glands occasionally
Adenomatoid hyperplasia is now classified by the WHO as pancreatic intraepithelial neoplasia-1B, which refers to putative precursor lesions. Although progression to invasive cancer has not been confirmed, the assumption that it represents a premalignant lesion is based on the reported coexistence with ductal adenocarcinoma and is further supported by the high incidence of k-ras mutation. Adenomatoid hyperplasia was found to be the duct lesion with the highest mutation rate while the majority of the cases harboring k-ras mutations belonged to the aforementioned peculiar variant. Our case exhibited extensive reaction for p21 ras protein, showing strongest intensity in the dysplastic foci.

Adenomatoid hyperplasia presenting as a pancreatic tumor seems to be rare and has not been reported in literature. There are strong indications that it represents a specific subtype, thus assuming prognostic significance. According to current knowledge operative intervention seems to be justified.

References


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