PANCREATIC CANCER: IN TRANG HOSPITAL 2001-2004

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ABSTRACT

Pancreatic adenocarcinoma is the second most common cause of death from cancer of the gastrointestinal tract. Due to the absence of early signs or symptoms, many patients were diagnosed after the cancer is too advanced for surgical removal.

Demographic data, clinical presentation, sonography and computed tomography (CT) features of eight patients with pancreatic cancer, diagnosed in Trang Hospital between January 2001 and December 2004 were reviewed.

The patients were five men and three women with age ranging from 32 to 77 years old (mean age, 51.4 years). All patients presented with obstructive jaundice. All of the cases, the cancer were localized to the head of the pancreas. Direct visualization of the tumor by sonography was about 83% and by CT was 100% Six cases (75%) were hypovascular masses. Dilatation of both the pancreatic duct and the biliary ducts were observed in all patients by CT. All cancer were unresectable due to vascular encasement. Three cases (37.5%) had liver metastases.

Key words: pancreatic cancer, pancreatic adenocarcinoma

INTRODUCTION

Of all the GI malignancies, pancreatic adenocarcinoma is the second most common cause of death from cancer. In clinical practice, pancreatic cancer is synonemous with pancreatic ductal adenocarcinoma, which constitutes 90% of all primary malignant tumor arising from the pancreatic gland.[3] Clinical symptoms and signs develop late and depend on the site of the tumor. Tumors in the body and tail produce late symptoms. Carcinomas of the pancreatic head typically present with obstructive jaundice. This presentation usually leads to either abdominal ultrasound or computed tomography scan to determine the source of the symptoms. Due to the absence of early signs or symptoms, many patients are diagnosed only after the disease has already spread or metastasized which means the cancer is too advanced for surgical removal.[1-5] The purpose of this study was to identify abdominal sonography and CT features of the pancreatic cancer diagnosed in Trang Hospital.

MATERIALS AND METHODS

The patients of pancreatic cancer diagnosed in Trang Hospital between January 2001 to December 2004, were reviewed retrospectively. Patients demographic data, clinical presentation, sonography and computed tomography (CT) features were analyzed.

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RESULT

The patients were five men and three women, 32-77 years old (mean age, 51.4 years). The symptoms of all eight patients were obstructive jaundice.

Six of the eight patients had abdominal ultrasonographic study to be reviewed. Dilatation of the common bile duct was observed in all six patients and dilatation of the pancreatic duct was observed in three patients. Of the six patients, hypoechoic mass was observed in the head of the pancreas in five patients, but no mass was observed anywhere in one patient. Calcification was observed in the mass in one patient. (Fig.1 and 2)

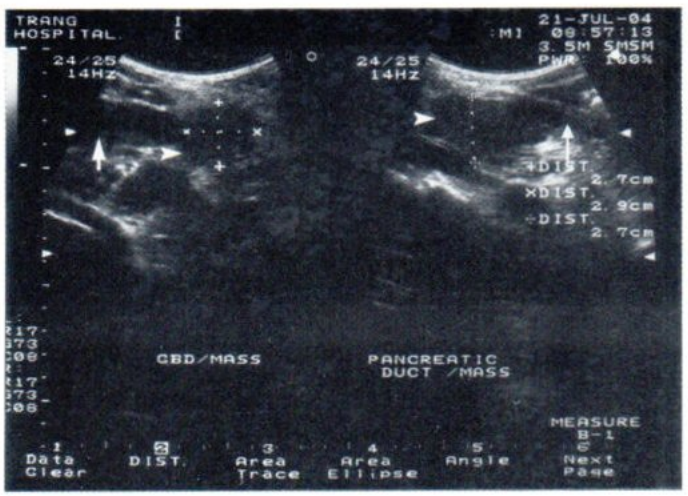

Fig.1 66-years-old man with mass in pancreatic head.
Sonography shows hypoechoic mass in pancreatic head (arrowhead) with obstruction of common bile duct (short arrow) and pancreatic duct (long arrow).

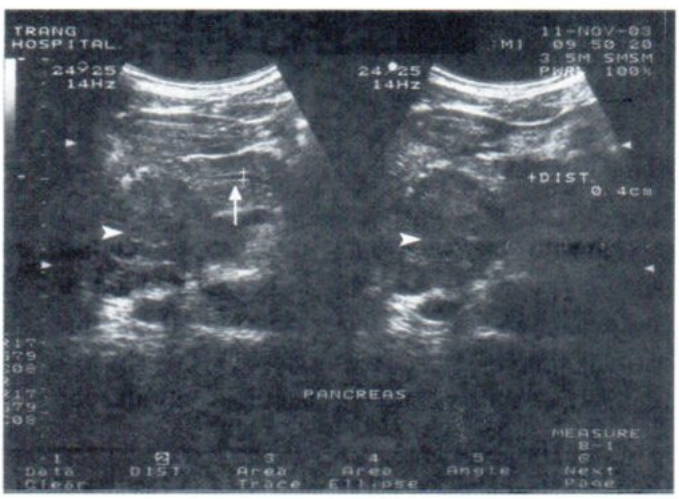

Fig.2 37-years-old man with mass in pancreatic head.
Sonography shows hypoechoic mass in pancreatic head (arrowhead) with obstruction of pancreatic duct (long arrow).

All eight patients underwent CT (Tomoscan SR 7000, Philips Medical Systems) of the upper abdomen. Pancreatic mass was observed in all patients. All of them were localized to the head of the pancreas and one had alrealy expanded to the body of the pancreas. The size of the masses were about 3 to 8 cm(mean size, 4.7 cm.). Six pancreatic masses showed hypovascular and one mass had internal calcification same as sonographic feature. The other two masses exhibited heterogeneous enhancement (one had opened biopsy from other hospital before underwent CT and another one was the biggest lesion). Obstruction of the main pancreatic duct and common bile duct were observed in all eight patients. The major blood vessels involved by the mass were detected in all patients. Three cases had liver metastases. (Fig.3 and 4)

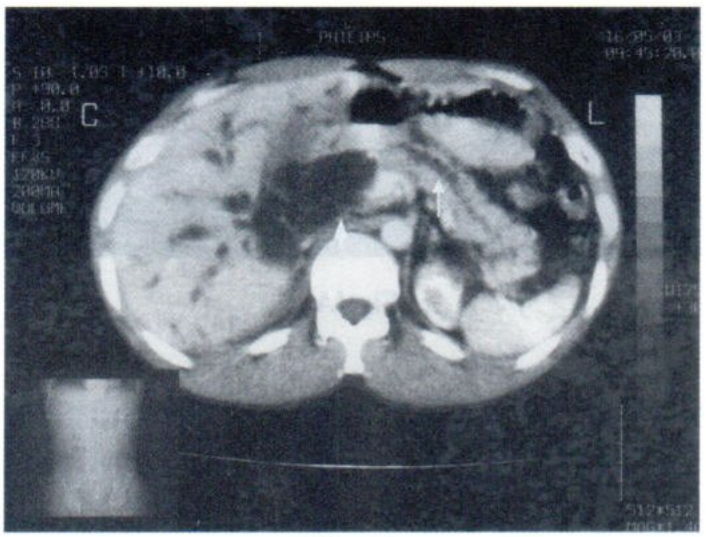

Fig. 3A

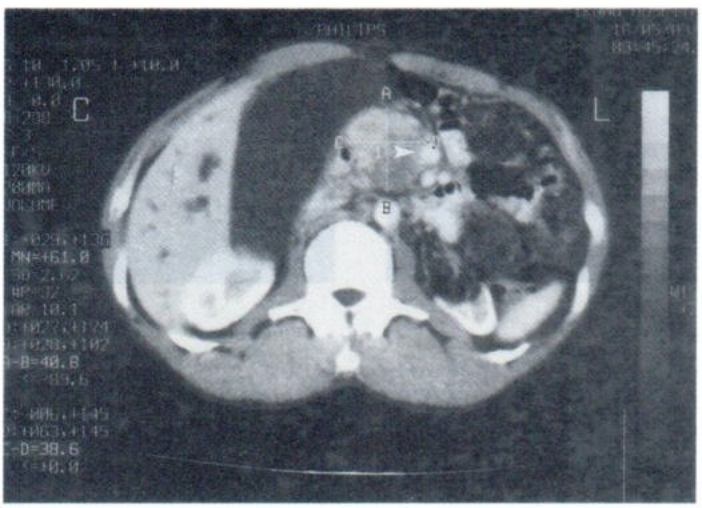

Fig. 3B

Fig.3 42-years-old man with mass in pancreatic head.
A. On contrast-enhanced CT, the pancreatic duct (long arrow) and biliary ducts (short arrow)are dilated.
B. More caudally, the tumor is seen in the region of pancreatic head and irregularity of the superior mesenteric vein (arrowhead) at the point of contact with the tumor.

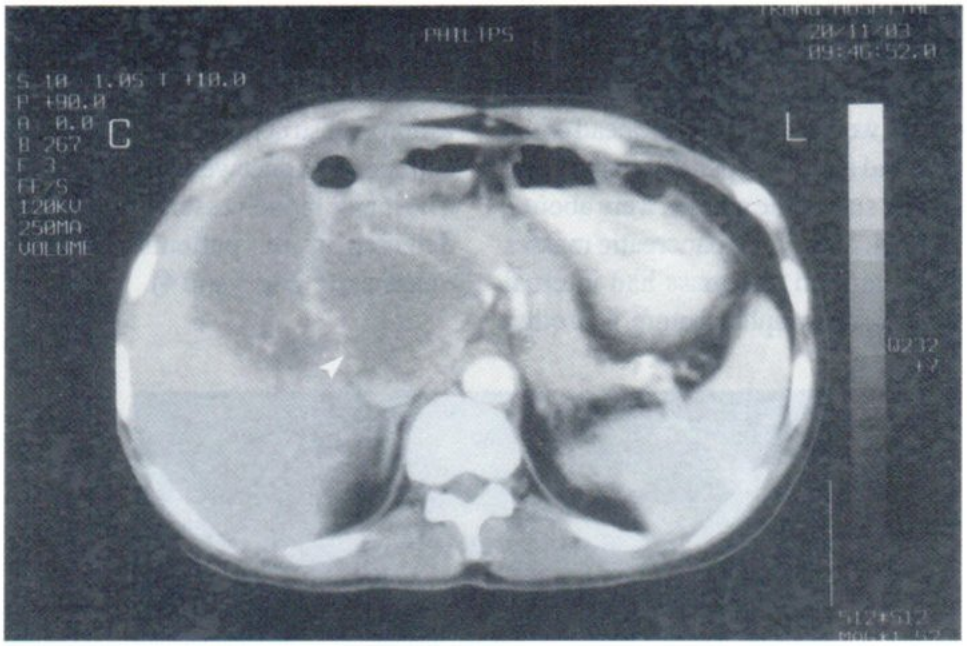

Fig.4A

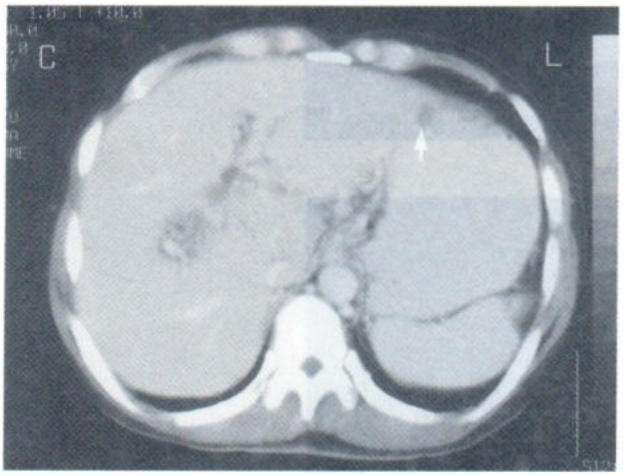

Fig.4B

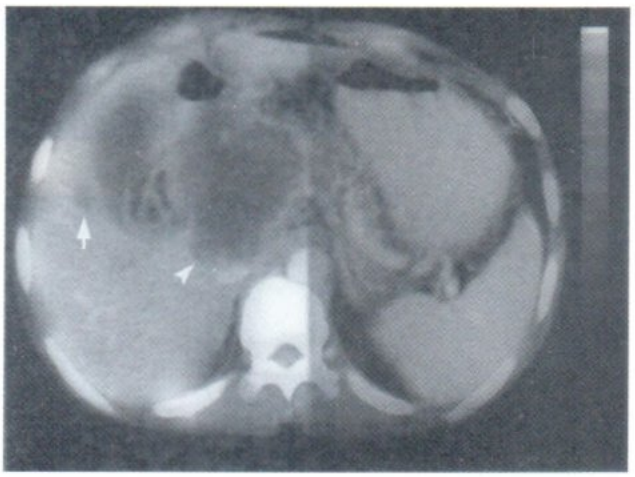

Fig.4C

Fig.4 37-years-old man with mass in pancreatic head.
On contrast-enhanced CT in arterial phase (A) and portal venous phase (B and C), hypovascular mass (arrowhead) is seen in the region of pancreatic head. Two hepatic metastases (short arrow) are also observed.

DISCUSSION

In this series, it was found that the disease is more common in men than in women the same as described in the previous literatures.[1,2,3,5,14] The male: female ratio was about 1.67: 1. The majority of cases were diagnosed between the ages of 60 and 80. It is uncommon in those younger than 40 years.[1,3,14] But in my series, the average age was about 51.4 years lower than all previous literatures. Two patients (25%) were younger than 40 years (32 and 37 years old) and both were male. All of the cases, the cancer were localized to the head of the pancreas which is mostly the location of the disease and typically presented with obstructive jaundice.[1-4] Imaging often begins with transabdominal sonography to identify the cause of jaundice. Sonography can screen for the presence and the point of common bile duct obstruction. However, The presence of obscuring overlying bowel gas and the variable skill of the operator limit the sensitivity of this technique for identification and staging of the pancreatic tumors. After sonography, CT is the modality mostly used as the primary modality for diagnosis and staging.[2] In this series, direct visualization of the tumor by sonography was about 83% but by CT, all tumors (100%) were visualized in all cases. The masses were about 4.7 cm. in average diameter. Most lesions (75%) were hypovascular. Ductal dilatation occurred in all patients and all had dilatation of both the pancreatic ducts and the biliary ducts. Vascular encasement usually determines unresectability[2,8,9,11,12] and was seen in all cases in this series. The liver, peritoneum and regional nodes are the organs most commonly involved by distant metastases in patients with pancreatic carcinoma. 60% of the patients who present with pancreatic ductal adenocarcinoma have advanced diseases. CT has been reported a sensitivity of 75-87% for liver metastases.[2] In this series, it was found that liver metastases had already presented in 3 of the 8 cases (37.5%). The identification of nodal and peritoneal disease is difficult with all imaging modalities.[2] And in this series, the regional node metastases and peritoneal implants were not visible.

CONCLUSION

It was found that all pancreatic cancer diagnosed in Trang Hospital were unresectable at the time of initial diagnosis. Two of the eight patients were younger than 40 years. In all cases, the cancer were located in the head of the pancreas and typically presented with obstructive jaundice. Sonography was less sensitive than CT for the identification of the pancreatic mass. Due to initial symptoms of the pancreatic cancer are usually nonspecific e.g. abdominal pain and weight loss, 80-90% of patients have regional and distant metastases by the time they were diagnosed. I, therefore, suggest the use of sonography as a screening examination and CT as a detail study in the evaluation of the patient presenting with nonspecific symptoms such as abdominal pain and weight loss.

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