NON-PANCREATIC DISORDERS SIMULATING PRIMARY PANCREATIC
DISEASE ON ULTRASONOGRAPHY

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The purpose of this paper is to present fifteen patients who were felt to have primary pancreatic lesions on echography, but whose primary pathology involved nearby organs.

The ultrasound procedures were performed with a commercially available gray scale ultrasound unit, using a 2.25 MHz, 19mm diameter transducer with a long internal focus. According to the manufacturer, the average prior output of this transducer-gray scale unit combination is 0.6-0.8 milliwatts per square cm. The patients were studied in the supine position. Transverse and longitudinal scans and occasionally oblique transverse scans along the presumed long axis of the pancreas were obtained. In addition, if it was deemed necessary, some of the patients were studied in the prone position to better evaluate the pancreatic tail.

Fourteen of these patients who had apparent pancreatic disease on echography were subsequently shown to have either disease of the lymph nodes in the pancreatic region or secondary involvement of the pancreas by inflammation of nearby organs. In each of these patients, the echogram revealed findings interpreted as either a localized pancreatic mass or diffuse enlargement of the pancreas. These cases were discovered in the course of reviewing our experience with 500 patients who were referred to us for abdominal ultrasonography.

We have since seen one additional patient whose echographic findings mimicked a pancreatic pseudocyst.
Seven of the cases involved the presence of neoplastic disease, non-pancreatic in origin. This group included two cases of lymphoma not previously diagnosed and four patients with tumors originating in the gastrointestinal tract. These included a carcinoma of the esophagus, a carcinoma of the stomach, one patient with cholangio-carcinoma, and one patient with carcinoma of the ampulla of Vater. The seventh case was a woman with carcinoma of the ovary that had metastasized extensively to the para-aortic lymph nodes. In all of these cases, the pancreas was not diseased, rather the primary tumor had metastasized to lymph nodes in the pancreatic region, and the resultant mass simulated pancreatic enlargement on the echogram.

The other seven cases had gastrointestinal inflammatory disease. Two of these patients had peptic ulcers. One had a duodenal ulcer, which penetrated posteriorly to involve the pancreatic head, while the other patient had a benign gastric ulcer on the posterior wall of the stomach. The other five patients had symptoms and clinical findings compatible with cholecystitis. Each of these patients had evidence of pancreatic head enlargement on echography without definite clinical evidence of pancreatitis. Three of the five patients with cholecystitis were treated medically for pancreatitis and subsequent echograms revealed decrease in the size of the mass involving the pancreatic head. The other two patients underwent cholecystectomy for cholelithiasis. In these seven cases, the primary inflammatory lesion was in either the stomach, duodenum, or gall bladder. Although pancreatitis was not the primary clinical diagnosis, the pancreas was apparently secondarily inflamed, producing pancreatic enlargement, which was noted on the echogram.

The fifteenth case was that of a patient who had previously undergone renal transplantation. Subsequent echography revealed a large, highly transonic mass in the epigastric region, which was interpreted to be a possible pancreatic pseudocyst. The mass proved to be a lymphocele located a considerable distance from the transplanted kidney. The reason for the remote location of the lymphocele was probably due to adhesion from previous bouts of peritonitis.

Appropriate scans and correlative studies will be shown demonstrating both neoplastic and inflammatory disease simulating pancreatic disorders.

The anatomic definition of the pancreas with ultrasound depends considerably on our ability to display in great detail the portal venous system, particularly the splenic vein and the superior mesenteric vein, and also adjacent organs such as the gall bladder. In cases of primary pancreatic disease, but also when