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The technique rests upon the introduction of a catheter into the right internal jugular vein and then wedging it in the hepatic veins under fluoroscopic control. A biopsy needle is advanced 15mm. into hepatic tissue, and with suction, a fragment of tissue is aspirated. The only serious complication occurred in a cirrhotic patient with a small liver who died of intraperitoneal bleeding through a perforation in the hepatic capsule. The authors consider that transvenous biopsy of the liver is required for the histologic evaluation of about one-third of patients with hepatic disease when percutaneous biopsy is contraindicated.

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The sensitivity, specificity and accuracy of the scan and of the biochemical tests in the detection of metastatic disease of the liver were calculated. The most sensitive single examination was the group of biochemical liver tests. Liver scans performed in the presence of normal biochemical test results were insensitive compared with the liver scan alone or the liver scan done in the presence of abnormal biochemical test results.

The specificity and accuracy of all tests and combinations of tests were statistically significant. It is concluded that screening for hepatic metastases in patients with cancer is best accomplished with the more sensitive and less expensive battery of biochemical tests of the liver, reserving the liver scan for those patients with abnormal test results.

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Since 1978, 141 Whipple duodenopancreatectomies with concomitant gel induced ductal obstruction were performed for treatment of chronic pancreatitis. One patient died after operation as a result of myocardial infarction. Only one patient had recurring pancreatitis. After a follow-up period of four years, no complications related to the pancreas were present.

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NINE HUNDRED AND NINETY-ONE instances of carcinoma of the exocrine pancreas were recorded in New Zealand from 1970 to 1974. Endocrine tumors and tumors of the ampulla of Vater were excluded. The male-to-female ratio was 6:4, and the incidence of the disease increased with the age of the patient. Unlike in North America and Western Europe, where the incidence of the disease increased markedly from 1950 to 1973, the incidence in New Zealand did not increase during that time. The disease is biologically the same in Maoris and Caucasians. In New Zealand, the incidence rate of metastases to the lymph nodes at the time of diagnosis was 77 per cent. The three year survival rate for all patients was only 4 per cent, with a median length of survival of 1.7 months. Among the 7 per cent of the patients who were treated by resection, the three years survival rate was 10 per cent, with a median length of survival of six months.

It is concluded that the highest incidence of carcinoma of the pancreas in the world is among the Maoris; it exceeds the high incidence found among native Hawaiians and black Americans. Factors possibly contributing to the high incidence among Maoris are heavy smoking, obesity and a high incidence of diabetes mellitus.

John A. McCredie

Operative Cholangiography; the Case for Selective Instead of Routine Operative Cholangiography. Edwin A. Deitch and Vincent E. Voci. Am. Surg., 1982, 48: 297-301.

PATIENTS who are not clinically at risk of having calculi of the common bile duct by history, laboratory test results or operative findings do not require routine operative cholangiographic procedures. The average cost of an operative cholangiogram is \$328.00, and in a review study, 3.3 per cent of 4,665 cholangiograms were falsepositive. Of course, this figure is balanced by the 3.7 percent of patients undergoing routine cholangiographic procedures who have clinically unsuspected calculi of the common bile duct.

Routine operative cholangiographic procedures have been entrenched in American surgical practice for perhaps 25 years. The question is whether or not cholangiography can be used with liberal indications to better serve a population than using cholangiography on a routine basis. Using clinical risk factors, including jaundice and laboratory indicators, such as increased serum alkaline phosphatase levels and a dilated common bile duct on preoperative roentgenographic study and elevated serum transaminase levels, patients who were more likely to have calculi of the common bile duct could not be identified. However, 88 per cent of patients with bilirubin excess of 6mgm. per cent and of patients with

common ducts on preoperative roentgenograms that were greater than 1.5 cm. in size had surgically verified disease. In a climate of limited medical resources, the value of any screening test should be evaluated in terms of its risk to patient and the cost-benefit ratio. Applying clinical criteria to patients undergoing cholecystectomy will reduce the ratio and reduce the rate of false-positive intraoperative cholangiograms.

Keith Thompson

Acute Pancreatitis; the Difficulties of Diagnosis and Therapy. Martin R. Eichelberger, Dennis J. Hoelzer and C. Everett Koop. J. Pediatr. Surg., 1982, 17 : 244-254.

ACUTE PANCREATITIS, an uncommon entity in children, was diagnosed in 24 patients during a 24 year period. Twenty patients were less than 15 years old. Ten patients had traumatic pancreatitis. Eight patients had blunt trauma to the abdomen, four instances of which were child abuse, and two patients had postoperative pancreatitis. Other causes of pancreatitis were disease of the biliary tract in four patients, mumps in three patients and pancreatitis induced by steroids in three patients. In four patients, no cause was identifiable. All 24 patients survived the acute disease process. Medical therapy, consisting of cardiovascular resuscitation, nasogastric suction and parenteral nutritional support, was the method of management-unless an anatomically remediable lesion, such as pseudocyst or disease of the biliary tract, was present or unless the patient deteriorated while undergoing nonoperative treatment. Threepatients underwent drainage of pseudocyst, two patients had cholecystostomy, two patients underwent Roux-en Y choledochoj ejunostomy, and one patient had a cholecystectomy with exploration of the common duct and drainage with a T tube.

The difficulty of diagnosing pancreatitis in children is emphasized in this article. The value of various diagnostic and therapeutic methods is discussed.

Clayton H. Shatney

Palliative Treatment of Obstructive Jaundice, by Transpapillary Introduction of Large Bore Bile Duct Endoprosthesis; Experience in 45 Patients. K.Huibregtse and G.N. Tytgat. Gut, 1982, 371-375.

DECOMPRESSION of a biliary system that is obstructed by reason of malignant processes is now possible through an endoscopically inserted bile duct endoprosthesis. Most patients who have malignant obstruction of the bile duct are suitable only for palliative by pass procedures. Open procedures for palliation are associated with a mortality estimated as high as 33 per cent. In 45 patients, biliary flow through an orally introduced bile endoprosthesis was adequate for decompression. Cholangitis and chills occurred in 11 of 45 patients and were thought to be related, in part, to iatrogenic instillation of bacteria from the biopsy and air channels of the endoscope. The endoprosthesis was positioned to project from the papilla into the duodenum, but this has not been associated with pancreatitis. A routine papillotomy was performed and may enhance the pancreatic drainage. Certain advantages of endoscopically introduced prostheses are obvious in comparison with percutaneously introduced prostheses.

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Complications of Splenectomy in Childhood (Komplikationen nach Splenektomie in Kindesalter) A.M. Holschneider, H. Kricz-Klimeck, B. Strasser and others. Z. Kinderchir., 1982, 35: 130-139.

A series of 161 children ranging from three days to 18 years old who underwent splenectomy from 1967 to 1980 is presented. For 82.0 per cent of the children, the indication was an underlying hematologic disease-most often, spherocytosis, 29.2 per cent, or Hodgkin's disease, 14.3 per cent. The remaining indications for the procedure included splenic rupture, 12.0 per cent, or Hodgkin's disease, 14.3 per cent. The remaining indications for the procedure included splenic rupture, 12.0 per cent, localized splenic disease, 3.0 per cent, or as a technical part of another procedure of the abdomen, 2.5

per cent. Beginning in 1976, all patients received pneumococcal vaccine in addition.

Thirty-five septic complications occurred and resulted in seven deaths, a mortality of 4.7 per cent. Eight of these complications were local wound infections associated with no deaths. Three serious complications occurred immediately after operation and were associated with no deaths. These included pleuritis in one patient, peritonitis in one, both secondary to left subphrenic inflammation, and adhesive obstruction in one patient. Serious septic complications developed within one month in eight patients, 5.3 per cent, and after one month in 16 patients, 10.6 per cent, with one death in the early group and six in the late group. The underlying disease of six of the patients with septic complications was thought to have contributed to the development of the infection; if these patients are removed from the series, 24 with infections still remain, 14.8 per cent.

Although the over-all mortality in the series was 4.3 per cent, the mortality in the infected patients was 33.9 per cent. The most common infection was pneumonia, associated with a mortality of 25.0 per cent, followed by generalized sepsis, 36.0 per cent, and meningitis, 20 per cent. Five patients had multiple serious simultaneous or sequential infections. Both the incidence and mortality were higher among males than females. Patients undergoing splenectomy during the first year of life accounted for 68.2 per cent of the infections and 57.1 per cent of the deaths. Only 9.1 per cent occurred when the splenectomy was performed upon patients over three years old. Pneumococcus was involved in 61.5 per cent of the infections and 100.0 of the deaths when a pathogen was isolated.

One hundred and two patients who had undergone splenectomy eight months to 37 years earlier were studied, and leukocytosis was found in 47 per cent, thrombocytosis in 30 per cent and lymphocytosis in approximately 50 per cent. All patients who had undergone splenectomy for medical indications other than rupture showed Howell-Jolly bodies in their erythrocytes, whereas this occurred in only eight of the 22 who underwent splenectomy for rupture. The immunoglobulin levels were studied in 100 previously splenectomized patients, and there was universal elevation of the IgG and IgA as well as the C, and C, complement levels accompanied by a reduction in IgM levels. These changes were most marked in the patients undergoing splenectomy for spherocytosis, Hodgkin's disease and other anemias.

And although those treated for splenic rupture showed a lesser degree of change, the changes were statistically significant. There was no correlation between the immunoglobulin levels and the age at the time of operation. In 16 similar patients, serum alpha-1 antitrypsin levels showed an increase in one patient and a decrease in 12 patients. One-third of the patients showed a mild to significantly elevated transferrin level.

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