and laboratory data, the most reasonable clinical diagnosis is hilar type cholangiocarcinoma. However, a metastatic cancer cannot be completely ruled out since this patient had a the past history of villous adenoma with malignant change of the rectosigmoid colon.

Cholangiocarcinoma is a form of adenocarcinoma arising from the intrahepatic or extrahepatic biliary epithelium. Tumors at the bifurcation of the common hepatic duct (termed Klatskin tumors) commonly invade the liver by direct extension. The usual presentation of cholangiocarcinoma involving the common hepatic or common bile duct is progressive obstructive jaundice. More proximal lesions that produce localized obstruction of intrahepatic branches of the biliary tree may cause vague abdominal pain associated with marked elevation of the serum alkaline phosphatase without jaundice. The most useful imaging study is cholangiography, which typically demonstrates segmental narrowing or obstruction. Only 1/3 of cholangiocarcinomas are resectable for cure at the time of presentation. Response to radiation or chemotherapy is limited. Most patients die of local hepatic invasion rather than distant metastases. Overall survival for cholangiocarcinoma is less than 10% at 5 years.[1]

Clinical Diagnosis

(1) Cholangiocarcinoma, status post common bile duct stent insertion and radiotherapy,
(2) Partial gastric outlet obstruction, probably due to direct tumor invasion,
(3) Sepsis.

PATHOLOGICAL DISCUSSION

Microscopic examination of the previous segmentally resected rectosigmoid colon showed a villous adenoma with malignant change (Fig. 1). Focal invasion to the muscular layer was noted. The surgical margins and the 7 dissected lymph nodes were free from malignancy. The gallbladder revealed a picture of chronic glandular cholecystitis.

At autopsy, the most important finding was a well-defined, whitish, and indurated tumor mass measuring 7 × 6 × 4 cm in the hilar region of the liver with dilatation of the bilateral intrahepatic ducts (Fig. 2). The tumor spread along the stent extrahepatically and extended to the common bile duct, hepatoduodenal ligament, and directly invaded the diaphragm, antrum and low body of the stomach, and first portion of the duodenum. Multiple intrahepatic metastatic nodules were also noticed. Disseminated metastases of the peritoneum, intestines, mesentery, spleen, pancreas, lungs, pleura, and general lymph nodes were evident. Marked peritoneal carcinomatosis was seen.

Microscopically, the hepatic tumor showed a picture of a moderately differentiated cholangiocarcinoma growing in a tubuloglandular pattern with nests in the markedly desmoplastic stroma (Fig. 3). The neoplastic cells showed marked nuclear pleomorphism and irregular cell borders with occasional bizarre forms. Ob-

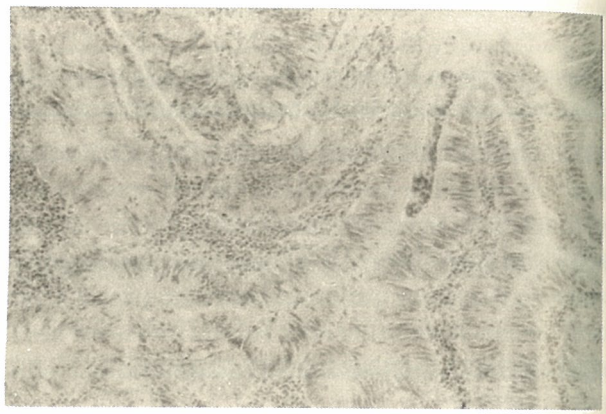

Fig. 1. Previous segmentally resected large intestine showing a villous adenoma with malignant change (H&E 100X).

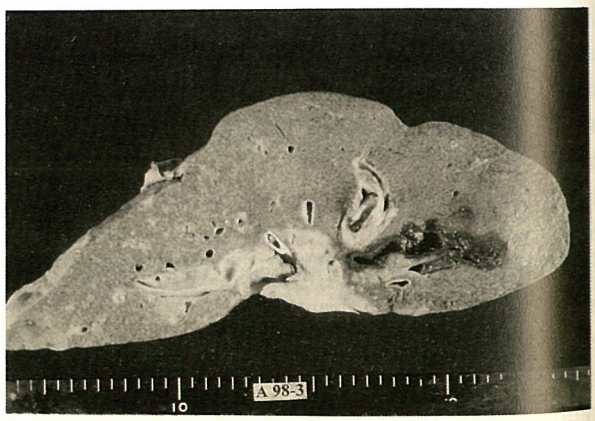

Fig. 2. Well-defined, whitish, and indurated tumor measuring 7 × 6 × 4 cm in the hilar region of the liver with dilatation of the bilateral intrahepatic ducts.