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ANEURYSM OF THE HEPATIC ARTERY AS AN UNUSUAL CAUSE OF OBSTRUCTIVE JAUNDICE

RICHARD L. COLLIER, M.D.* AND THOMAS A. FOX, M.D.**

Aneurysms of the hepatic artery are rather rare lesions, with most patients dying of associated complications. Including our report, 148 cases of aneurysm of the hepatic artery are recorded¹; approximately 39 patients have survived surgical treatment. Preoperative diagnosis is seldom made, and most often rupture of the aneurysm has already occurred.

The most common symptom is abdominal pain, located in either the epigastrium or the right upper quadrant. Massive hemorrhage into the biliary or gastrointestinal tract — or intraperitoneal hemorrhage — is frequent.^{2,4} Half the patients are jaundiced because of extrinsic pressure on the common bile duct. A typical syndrome of upper abdominal pain, jaundice, and massive gastrointestinal hemorrhage is said to occur in about 30% of cases.^{1,6}

An increased awareness of the condition plus judicious use of angiographic techniques, especially when calcium is demonstrated in the area on flat films, or in instances when a bruit is present or mass is palpable, may lead to earlier diagnosis.^{3,5,7}

CASE REPORT

This patient was a 63-year-old-white male. For two months prior to admission he had noted light clay-colored stools and dark urine. Three weeks before admission, he became jaundiced. The jaundice progressively increased. He lost six pounds during this period and felt easy fatigability and malaise. In addition, the patient had a past history of bleeding peptic ulcer.

Physical examination revealed a jaundiced white male with hepatomegaly and a palpable gallbladder. There were no other gastrointestinal symptoms. He denied chills or fever, had no abdominal pain, nausea, vomiting, or anorexia.

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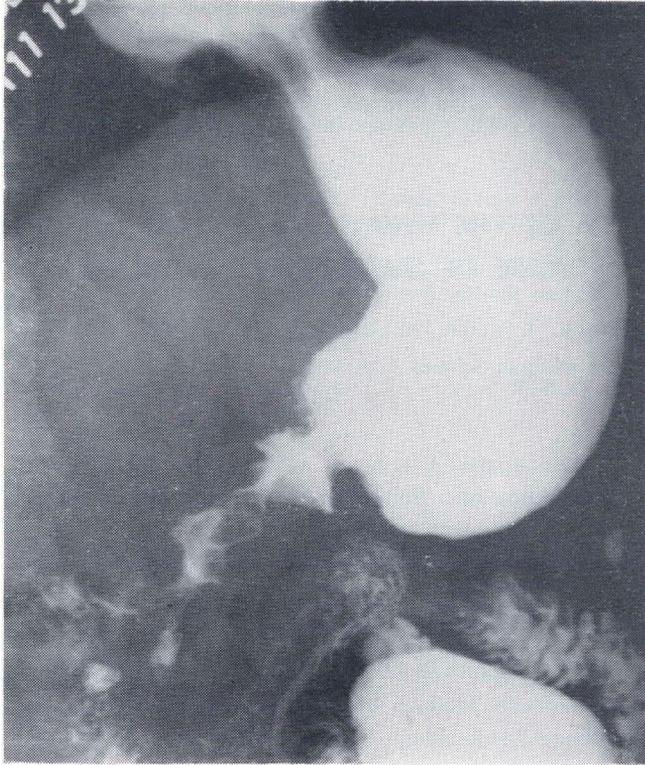


Figure 1

Distal stomach, proximal duodenum, and soft tissue mass.

Hemoglobin was 11.3 gms/100 cc with a normal leukocyte count. The prothrombin time was 18 seconds with a control of 15 seconds. The bilirubin was 8.3 mg/100 cc, with a direct component of 4.15. Alkaline phosphatase was 16 Bodansky units. Serum electrophoresis revealed a total protein of 7.8 gms percent with an albumin of 2.78, and gamma globulin elevated to 2.34 gms percent. X-rays disclosed deformity of the distal stomach and proximal duodenum with evidence of an associated soft tissue mass (Fig. 1).

The operative findings were an enlarged hard liver that appeared cirrhotic and was greenish black in color; a gallbladder tense and distended; a large 10 x 4 x 6 cms mass, extending from the liver downward into the porta hepatis and behind the duode-

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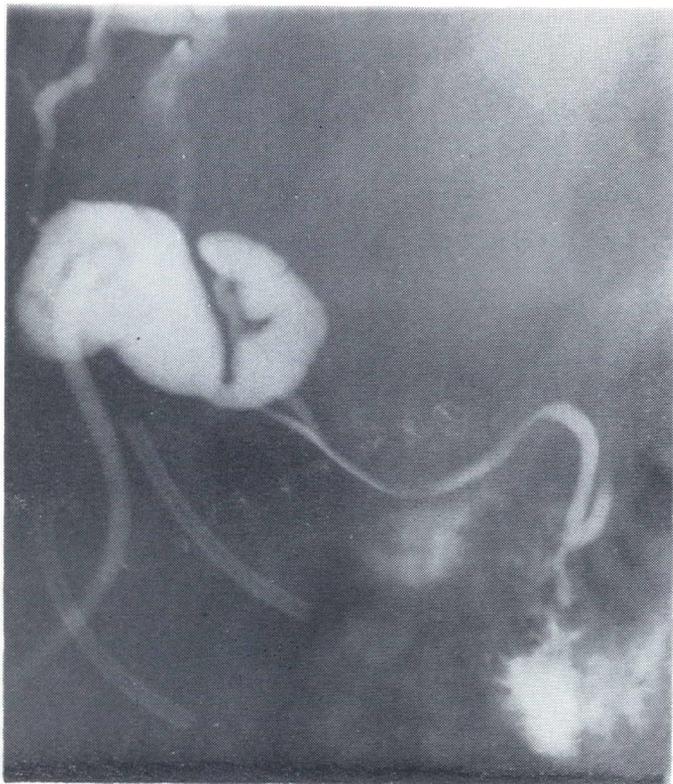


Figure 2

Extrinsic pressure on the common duct distal to insertion of cystic duct.

num. The mass was pulsatile and a thrill could be felt over it. The abdominal aorta was identified separate from the lesion. Needle aspiration of the mass disclosed bright red blood on one occasion and on repeat aspiration, bile was obtained. Decompressive cholecystostomy was done.

Postoperatively, his bilirubin increased to 13.7 and hepatic decompensation seemed imminent. He improved gradually with vigorous treatment with diuretics and strict dietary control. Cholecystostomy-tube cholangiogram, at this time, disclosed extrinsic pressure on the common bile duct just distal to the insertion of the cystic duct (Fig. 2). The pancreatic duct was seen also. The patient was discharged somewhat improved.

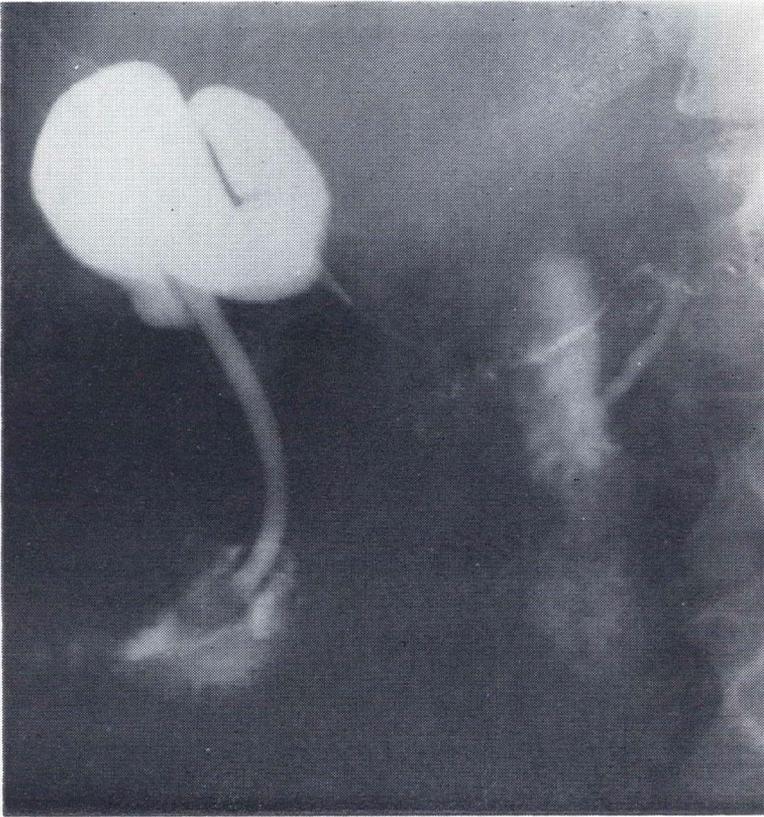


Figure 3

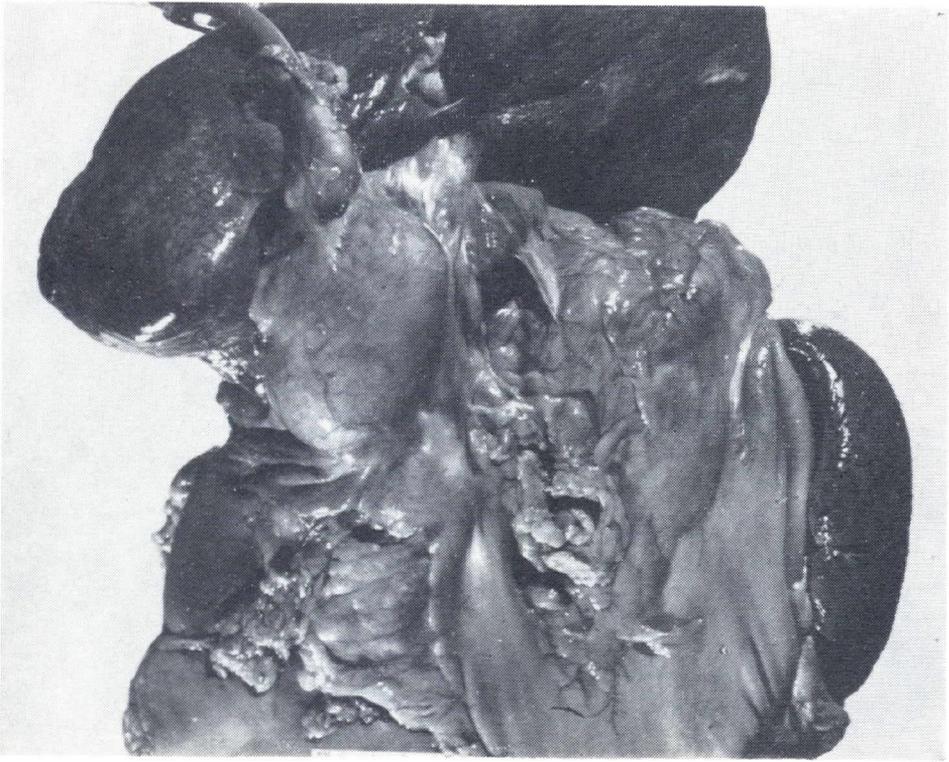
Increasing pressure on cystic and common ducts.

Outpatient Department progress-cholangiogram showed failure of filling of the midportion of the common bile duct and increasing extrinsic pressure on the proximal portion of the cystic duct and distal common bile duct. (Fig. 3).

Because of increasing jaundice, weakness, and anorexia, the patient was readmitted to the hospital.

Hemoglobin determination on admission was 5.8 gms percent, bilirubin was 7.6 mgms percent and prothrombin time 19/15. Tarry stools were noted. The patient was transfused but he gradually deteriorated, became comatose, and expired.

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Photograph 1

Tube entering gallbladder leading to mass in porta hepatis.

Autopsy revealed an aneurysm of the hepatic artery, completely thrombosed and obstructing the common bile duct. The liver disclosed massive necrosis. The lesion measured 12 x 9 x 7 cms. The hepatic artery arose from the superior mesenteric artery in this case. The aneurysm extended from 1.5 cms of the origin of the superior mesenteric artery to where the hepatic artery branched into several smaller hepatic arteries entering directly into the liver. (See gross autopsy photost 1, 2, 3.)

Microscopic sections of the kidney and of the liver showed bile nephrosis and marked biliary cirrhosis.



Photograph 2

Common bile duct opened over the aneurysm.

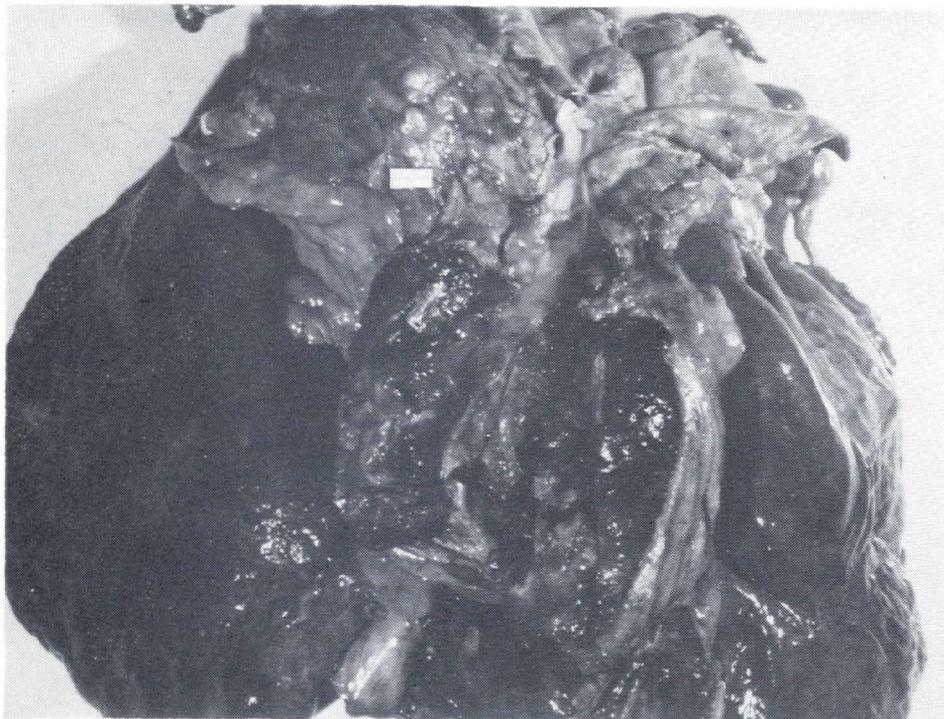
SUMMARY

Aneurysm of the hepatic artery as an unusual cause of obstructive jaundice is reviewed and a case presented. Most of these lesions are either arteriosclerotic or infectious in origin. Occasionally, the lesion may result from trauma.

Review of successfully treated patients shows that either excision of the lesion and anastomosis, or proximal ligation of the hepatic artery is the therapeutic procedure of choice. The exact anatomical location of the lesion determines the best mode of treatment. Usually, lesions involve the common hepatic artery (50-75%) or the right hepatic artery (25%).

This case is presented to provide an awareness of this condition so that earlier diagnosis and therapy of these rare lesions may result.

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Photograph 3

Hepatic artery aneurysm opened demonstrating thrombus and almost complete occlusion of the lumen.

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