

A CASE OF CARCINOMA OF THE LIVER ERODING INTO THE EXTRAHEPATIC BILE DUCT DEMONSTRATED BY TRANSHEPATIC CHOLANGIOGRAPHY

By K. S. Yeoh

(Department of Surgery, University of Malaya in Singapore)

and K. K. Ho

(Department of Pathology, University of Malaya in Singapore)

Carcinoma of the liver is known to cause jaundice by infiltration of the organ and obstruction of the intrahepatic biliary ducts. It is, however, extremely uncommon to see carcinoma of the liver causing jaundice by obstruction of the common bile duct.

In deeply jaundiced patients, visualisation of the biliary passages by means of radio-opaque dye, administered either orally or intravenously, is usually impossible as the dye is not passed through the liver. Under such circumstances, and where the jaundice is suspected to be of an obstructive type, then opacification of the biliary tree may be obtained by means of percutaneous transhepatic cholangiography. This is a case report of carcinoma of the liver eroding into the common bile duct to cause obstructive jaundice, and this unusual feature was demonstrated by means of percutaneous transhepatic cholangiography.

CASE REPORT

The patient, a 66-year old Chinese, was admitted to the General Hospital on 25th June, 1960, with a history of progressive jaundice, of six months' duration. Soon after the onset of jaundice the patient also developed pruritus, anorexia and breathlessness. He had also lost a considerable amount of weight.

On examination, the jaundice was clinically obvious, there were spider naevi on his body, and his hands showed "liver palms". The abdomen was soft and not tender. The gall-bladder was palpable. There was oedema around the ankles.

Liver function tests carried out showed a serum bilirubin level of 7 mg. % and serum alkaline phosphatase 60 K.A. units,

Percutaneous transhepatic cholangiograms (Figs. 1 and 2) revealed grossly distended biliary passages with a large filling defect in the lumen of the common bile duct.

Figure 1 shows the needle in situ and the picture taken immediately after injection of the

dye. The second figure was taken after removal of the needle, and it shows clearly the egg-shaped filling defect in the common bile duct and enlargement of the biliary passages above it.

The patient's condition rapidly deteriorated and he died of liver failure about two weeks after his admission to hospital.

At autopsy, 1,500 mls. of brown-coloured fluid were obtained from the abdominal cavity. The liver weighed 1,200 G. There were nodules on the lower surface varying in size from 2 m.m. to 10 m.m. in diameter, the gross appearances suggesting cirrhosis. The upper surface of the right lobe contained some greyish-coloured neoplastic nodules. On sectioning the liver, more neoplastic nodules were found in both lobes of the liver and extending into the intrahepatic veins.

The intrahepatic bile ducts were dilated. A large tumour (Fig. 3), measuring 6.5 x 3.5 x 3 cm. was found in the lumen of the common bile duct, but not attached to its wall. The gall-bladder was distended and contained viscid green bile.

Histologically, the tumour was of hepato-cellular origin, the cells being arranged in an alveolar or tubular fashion with a rich network of dilated and prominent capillaries (Fig. 4). The same arrangement of tumour cells was seen in sections taken from the intrahepatic tumour mass (Fig. 5).

DISCUSSION

It is generally recognised that liver cancer is relatively common among certain races. Tull (1932) in his study of 134 cases of primary carcinoma of the liver concluded that hepatic cancer is comparatively frequent among natives of Southern China and that cirrhosis of the liver is present in the great majority of cases with hepato-cellular cancer. Shanmugaratnam (1956) reported a high incidence of liver cell carcinoma among Singapore Chinese of South China origin; in the majority there was associated cirrhosis of the liver. Hou (1960) in his series of 950 selected cases found that of all malignant tumours

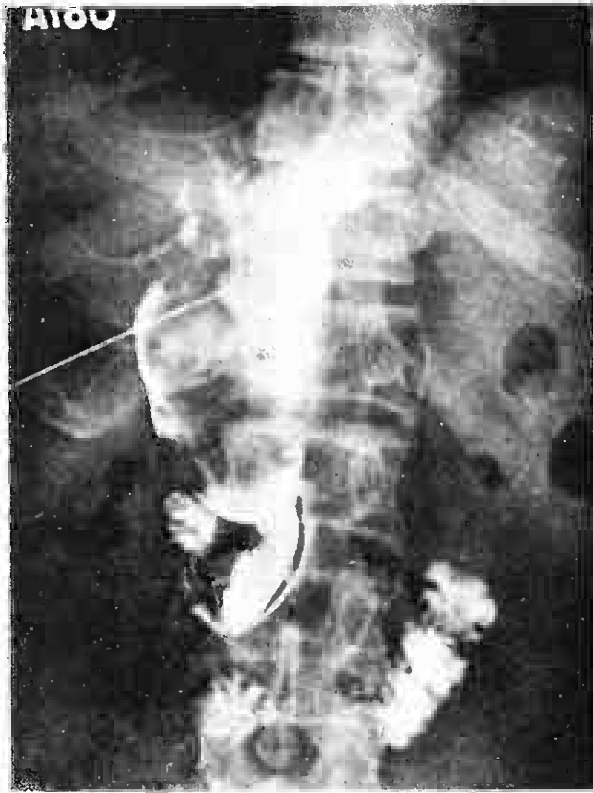


Fig. 1. Percutaneous transhepatic cholangiogram, with the needle in situ, showing gross distension of the extrahepatic bile ducts.

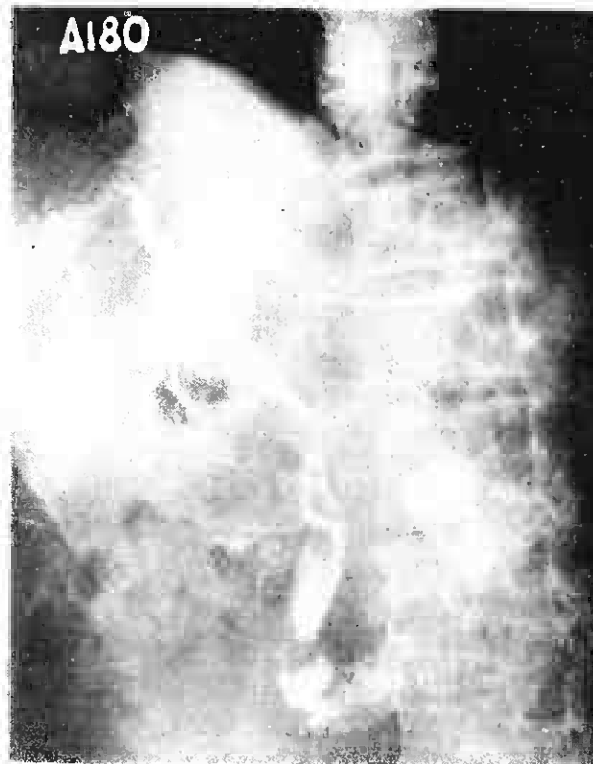


Fig. 2. Percutaneous transhepatic cholangiogram after removal of needle. Large filling defect is clearly shown in the bile duct. Below the filling defect the termination of the common bile duct appears to be normal.

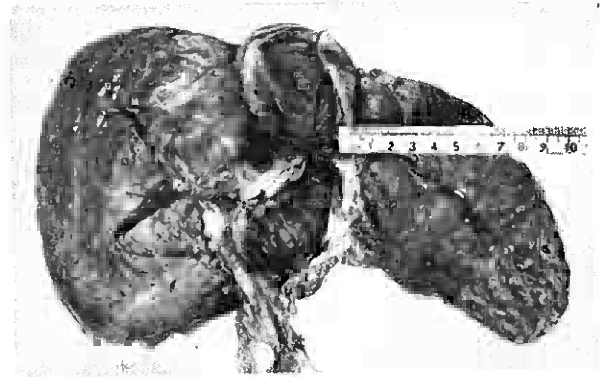


Fig. 3. Posterior view of the liver showing regeneration nodules at the surface. The extrahepatic biliary ducts are opened to show the massive tumour lying in it.

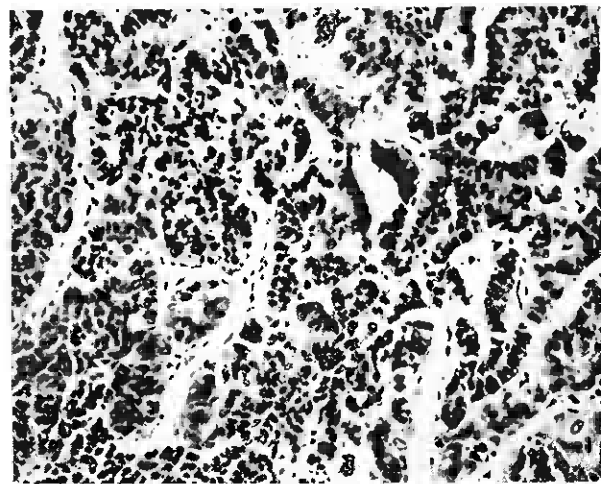


Fig. 4. Section from hepatic growth nodule shows malignant cells arranged in an alveolar or tubular fashion with a rich network of capillaries (H. & E.) x 150.

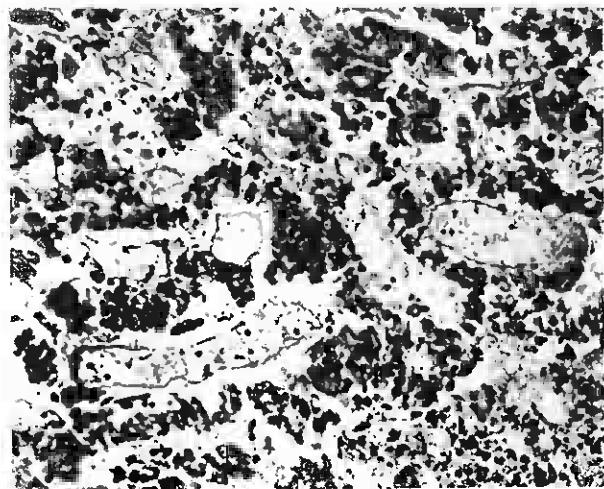


Fig. 5. Section of tumour mass from extrahepatic biliary ducts, showing malignant cells arranged in similar fashion as that in Fig. 4 (H. & E.) x 150.

TABLE I

YEAR	NO. OF DEATH DUE TO LIVER CANCER	TOTAL NO. OF DEATH FROM NEOPLASM	% DUE TO LIVER CANCER
1953	75	621	12.1
1954	77	627	12.4
1955	74	682	10.8
1956	84	728	11.5
1957	100	808	12.4
1958	96	858	11.2

necropsied in the course of 12 years, 37% were carcinoma of the liver, of which 68.1% were hepatoma; 74.1% of these hepatomas were associated with cirrhosis. Berman (1940) also reported a high incidence of liver cancer among the Bantus in Africa.

We believe that for hepato-cellular carcinoma to grow in such an extraordinary extensive fashion into the extrahepatic biliary ducts must be a rare feature and this may perhaps be the first of its kind to be reported. Muir (1961) in his series of 178 post mortem cases of primary liver cancer, collected over an 11-year period, found that 46% of the cases had invaded into the portal vein, but not a single one had extended into the extrahepatic biliary duct system like the one we have described.

In Singapore, carcinoma of the liver accounted for 11.7% (Table I) of all deaths from malignant disease during the period 1953-1958 (Report of the Ministry of Health in the State of Singapore for the year ended 31st December 1958, Table I). This is indeed a high figure.

Death from carcinoma of the stomach in the corresponding period accounted for 19.4%.

The operation for carcinoma of the liver is still fraught with danger. Unless operative care is exercised, bleeding remains the main bug bear of liver resection. Recent work done on the surgical anatomy of the liver has clarified the

intricacies of the structure of the liver (Gans), and has made possible more extensive liver resections. Not only wedge resections are performed, but also resection of whole lobes of the liver, even the larger right lobe.

Percutaneous transhepatic cholangiography is not a new diagnostic procedure. Huard and Do-Xuan Hop described the procedure in 1937 in Indo-China. It was not until 1952 after Carter and Saypol published their article that greater interest in their diagnostic method was aroused. This is now an established procedure and carries only a minimal risk of biliary leakage. If this complication is kept in mind it can be adequately dealt with. Santos gives a figure of 1-2%, and Atkinson et al gives 3.5% of cases which developed bile leakage. There was no mortality.

The procedure carried out for the patient was as follows:

Under local anaesthesia, a long needle 12 cm. long, 2 m.m. bore was inserted into the liver through a point on the skin 3 cm. below and to the right of the xiphoid process. Using a 20 mls. syringe, the needle was repeatedly aspirated until bile obtained. When the needle had entered the bile passages, as much bile as possible was aspirated, and then 70% diaginol was injected under fluoroscopic control. When the biliary passages are adequately opacified, the needle is removed. The patient should be closely observed for the next 24 hours for bile leakage.

SUMMARY

A case of hepato-cellular carcinoma is described, which showed the unusual feature of biliary obstruction at the common bile duct.

The incidence of liver cancer is mentioned with its racial distribution.

Percutaneous transhepatic cholangiography is described as a useful method in the investigation of jaundice.

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