

Hepatoma and obstructive jaundice

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Summary

Three patients with hepatoma are described whose presenting feature was obstructive jaundice.

Recognition of this rare manifestation of hepatoma can establish the diagnosis before surgery.

Introduction

Patients with hepatoma may present in many ways. Jaundice, when it occurs, is usually mild but occasionally obstructive jaundice results from invasion of the extra-hepatic biliary system. In this paper, 3 such patients are described.

electrophoresis with locally prepared rabbit anti-serum. A positive AFP test occurs in 80% of patients with hepatoma in Kaduna and false positives are exceptional. In addition to the details shown in Table 1, all patients had the following features of obstructive jaundice: stools either pale or containing blood; dark urine containing excess bilirubin and no urobilinogen; serum transaminases, SGOT and SGPT, within normal limits. The extra-hepatic obstruction was confirmed at laparotomy or post-mortem in all 3 patients.

Patient one had 2 episodes of obstructive jaundice,

TABLE 1. Biochemical features of patients with hepatoma and obstructive jaundice. Normal range in parenthesis

Case no.	Age (years)	Sex	Total bilirubin $\mu\text{mol/l}$ (3-14)	Conjugated bilirubin $\mu\text{mol/l}$ (< 3)	Alkaline phosphatase KAu./dl (3-13)	Alpha-fetoprotein	Further investigations
1	18	F	133	100	33	Neg.	Liver biopsy Laparotomy
2	26	M	390	289	26.5	Pos.	Liver biopsy Laparotomy
3	30	M	306	249	21.3	Pos.	Liver biopsy Post-mortem

Conversion SI to traditional units: bilirubin $1 \mu\text{mol/l} = 0.06 \text{ mg/dl}$.

Case reports

All patients were admitted to Ahmadu Bello University Hospital, Kaduna, Nigeria, between 1975 and 1977. Hepatoma is a common tumour in this northern savanna region and 162 such patients were admitted in the 2-year period. The details of the 3 patients are shown in Table 1.

The diagnosis of hepatoma was established by liver biopsy or by a positive test for serum α -fetoprotein (AFP), detected by countercurrent immuno-

the first settling spontaneously. During each episode she developed a tender mass the size of an egg over the liver. At laparotomy this was found to be inflamed omentum overlying the tumour. In addition there was solid tumour compressing the common bile duct. A biopsy was taken and drainage performed but the patient died during convalescence.

In the second patient, a pre-operative diagnosis of hepatocellular carcinoma was made on the basis of a positive AFP and liver biopsy. At laparotomy the common bile duct was infiltrated with tumour and successful drainage was performed.

At post-mortem in the third patient the liver was

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studded with tumour nodules, one of which had eroded into the common hepatic duct.

Discussion

Early reviews on hepatoma (MacDonald, 1957) indicate that an obstructive pattern of liver function tests may occur. However, recent literature (Sherlock, 1975) stresses that jaundice is both infrequent and mild. There have been sporadic reports of proved extra-hepatic biliary obstruction and rarely was the diagnosis made pre-operatively. In all, the obstruction was due to necrotic tissue (Ishikawa *et al.*, 1973), tumour (Elsner and Jauregui, 1972; Kuroyanagi *et al.*, 1977; Afroudakis *et al.*, 1978; Wind and Futterman, 1977), or blood clot (Johns and Zimmerman, 1961; Brand *et al.*, 1976), which had gained entrance to and blocked the extra-hepatic ducts. A characteristic of hepatoma is its ability to undergo necrosis and degeneration. Should this occur next to a bile duct, fragments could become detached with a resultant blockage of the duct.

The authors wish to emphasize that hepatoma may cause intermittent or progressive obstructive jaundice and this may be the presenting feature. Estimation of serum AFP or liver biopsy may establish the diagnosis before surgery.

References

- AFROUDAKIS, A., BHUTA, S.M., RANGANATH, K.A. & KAPLOWITZ, N. (1978) Obstructive jaundice caused by hepatoma. *American Journal of Digestive Diseases*, **23**, 609.
- BRAND, S.N., LAWRENCE, J., BRANDT, M.D., SPRAYREGAN, S., BRENNER, S. & BERNSTEIN, L.H. (1976) Extrahepatic biliary tract obstruction secondary to a hepatoma-containing blood clot in the common bile duct. *American Journal of Digestive Diseases*, **21**, 905.
- ELSNER, B. & JAUREGUI, E.M. (1972) Hepatocarcinoma with biliary obstruction. *Acta gastroenterologica latino-americana*, **4**, 111.
- ISHIKAWA, I., KOBAYASHI, K., ODAJIMA, S., TAKADA, A. & TAKEUCHI, T. (1973) Primary hepatic cancer with recurrent episodes of obstructive jaundice and distended gallbladder. *American Journal of Gastroenterology*, **66**, 496.
- JOHNS, W.A. & ZIMMERMAN, A. (1960) Biliary obstruction due to hemobilia caused by liver cell carcinoma. *Annals of Surgery*, **153**, 706.
- KUROYANAGI, Y., SAWADA, M., HIDEMURA, R., SHIGETAKE, A. & KATO, H. (1977) Common bile duct obstruction by hepatoma. *American Journal of Surgery*, **133**, 233.
- MACDONALD, R.A. (1957) Primary carcinoma of the liver. *Archives of Internal Medicine*, **99**, 366.
- SHERLOCK, S. (1975) *Diseases of the Liver and Biliary System*. 5th edn, p. 676. Blackwell Scientific Publications, London.
- WIND, G. & FUTTERMAN, S. (1977) Obstructive jaundice secondary to hepatoma. *American Journal of Gastroenterology*, **67**, 80.