sis was benign cystic teratoma. No organisms were isolated.

Primary retroperitoneal teratoma is a rare congenital tumor. Only 10% have been reported to occur after the age of 30 years and only 3 cases have been reported beyond 50 years. Of these, two were benign and one was malignant. The cyst is usually avascular.

In our case, ultrasonography did not reveal the classic picture of multiple tissue components. We feel the patient presented clinically as acute abdomen because of degeneration of the tumor. We believe that after evacuation, the collapsed cyst wall does not re-expand as it is contained by inflammatory fibrous tissue.

We conclude that retroperitoneal teratoma may be a rare cause of acute abdomen in an elderly person. It may be confused with perinephric or cold abscess.

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Correspondence to: Dr Pandya, B/101, Gokul Monarch, Thakur Complex, Kandivali (E), Mumbai 400 101. Fax: (22) 612 7603. E-mail: pandya_sv@yahoo.com

Received October 1, 1999. Accepted October 24, 1999

Hepatocellular carcinoma in association with membranous obstruction of inferior vena cava

KALPANA KARIA, SURENDRA K MATHUR, DEEPAK AMARAPURKAR, SUNDEEP J PUNAMIYA

Departments of Surgical Gastroenterology, *Gastroenterology and **Vascular and Interventional Radiology, Bombay Hospital and Medical Research Center, Marine Lines, Mumbai 400 020

We report a patient with hepatocellular carcinoma (HCC) with membranous obstruction of the inferior vena cava (IVC). He underwent balloon dilatation of the IVC with good results. The HCC was managed by chemoembolization followed by resection. At follow up of eleven months the patient is asymptomatic. [Indian J Gastroenterol 2000;19:90-91]

Key words: Liver cancer, IVC membrane

Membranous obstruction of the inferior vena cava (IVC) has been incriminated as a risk factor for hepatocellular carcinoma (HCC) in South African blacks and Japanese. A similar association has not been reported from India. We report a patient with HCC in a setting of membranous obstruction of the IVC.

A 35-year-old man presented with bilateral edema of the feet and distention of the abdomen since one month. He was diagnosed to have benign membranous obstruction in the suprarenal region of the IVC on color doppler and venography: he underwent balloon dilatation and IVC stenting following which the edema and ascites subsided. He also had raised serum α-fetoprotein levels (664 ng/L); CT scan of the abdomen and hepatic angiography revealed a hypervascular tumor, approximately 6 cm in diameter, arising from the undersurface of the right lobe of the liver (segments V and VI). Its blood supply was from an aberrant right hepatic artery arising from the superior mesenteric artery (Fig). Markers for hepatitis viruses were negative.

The patient underwent chemoembolization of the tumor followed by injection of absolute alcohol after two months. Post procedure CT scan and hepatic angiography showed regression in the vascularity and size of the tumor.

In view of normal liver function tests and no evidence of metastasis, right hepatic bisegmentectomy (segments V and VI) was done. Postoperatively the patient had reactionary hemorrhage from a collateral vessel, but responded to conservative treatment. Histology of the specimen revealed HCC without cirrhosis of liver. The resection margins were free of tumor. At eleven months' follow up, the patient is asymptomatic.

A high incidence of hepatocellular carcinoma has been reported in patients with IVC obstruction from Japan (36%), South Africa (46%) and Korea (30%). A lower incidence has been reported from Taiwan (12%). Approximately 5% of cases of hepatic vein thrombosis in Turkey developed HCC. Two major Indian studies on Budd-Chiari syndrome have not reported a single case of concomitant HCC.

The exact etiology of HCC in patients with membranous obstruction of the IVC is not known. Kew et al. found such an association only in patients who were born and raised in the Transvaal province of South Africa, and suggested that obstruction of the vena cava per se did not cause HCC but that its presence might render an

Fig: Selective angiography of right hepatic artery showing hypervascular tumor in segments V and VI of liver supplied by aberrant right hepatic artery
individual susceptible to environmental carcinogens other than hepatitis B infection, alcohol and smoking.

A mean interval of 5 years between the detection of benign obstruction of the hepatic IVC and the development of HCC has been reported from South Korea. In 27% of cases the tumor was detected after successful radiologic intervention and surgical correction of the obstructed IVC, suggesting that interventional management does not decrease the risk of development of HCC. In our patient, obstruction of the IVC and the HCC were detected simultaneously.

In conclusion, we report what we believe is the first case of HCC in an Indian with membranous obstruction of the IVC.

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Correspondence to: Dr Mathur, Hon. Consultant Surgeon
Received September 10, 1999. Accepted December 10, 1999

Hemoperitoneum following rupture of ectopic varix along splenorenal ligament in extrahepatic portal vein obstruction
T M RAMCHANDRAN, ANIL JOHN, S SYED ASHRAF, M S MOOSABBA, P V MADHAVAN NAMBIAR, SHOBANA DEVI
Departments of Gastroenterology and Surgery, Calicut Medical College, Calicut 673 008

A 29-year-old man with extrahepatic portal vein obstruction who underwent variceal eradication by sclerotherapy six years ago, was admitted with hypoten-sion and abdominal pain. Abdominal paracentesis yielded frank blood. Laparotomy showed bleeding from a large ectopic vessel along the splenorenal ligament. The vessel was ligated and the patient recovered. [Indian J Gastroenterol 2000;19:91]

Key words: portal hypertension

Hemoperitoneum from rupture of ectopic varix is a rare complication of portal hypertension with a high mortality rate. There is no report of extrahepatic portal vein obstruction with ruptured ectopic varix presenting as hemoperitoneum.

A 29-year-old man was admitted with sudden onset of abdominal pain and postural giddiness. He had vomited thrice, but there was no history of hematemesis or melena. There was no history of abdominal trauma. The patient had no recurrent hematemesis since childhood and was diagnosed to have extrahepatic portal vein obstruction. Endoscopic variceal sclerotherapy was done, six years back and variceal eradication was attained. He was asymptomatic till the present symptom.

On examination, the patient was pale; pulse rate was 106/minute, low volume and BP 110/70 mmHg. The abdomen was distended with diffuse tenderness and mild guarding; shifting dullness could be elicited. Spleenomegaly was present.

Investigations: hemoglobin 4.5 g/dlt; plain X-ray abdomen showed diffuse haziness. Abdominal paracentesis yielded frank blood. At laparotomy, the peritoneal cavity contained about 4 liters of blood. The spleen was enlarged and intact. Portal vessels were enlarged and tortuous. There was a bleeding vessel along the splenorenal ligament which was ligated. Splenectomy was also done. Seven units of blood were transfused. The patient was discharged on the 7th postoperative day.

Hemoperitoneum has been reported following large-volume paracentesis, umbilical vein rupture, gall bladder bed ectopic varix rupture and retroperitoneal variceal rupture. But these reports are all in cirrhotic patients. Our patient had extrahepatic portal vein obstruction with normal liver function; he survived following prompt surgery.

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Correspondence to: Dr Shobana Devi, Professor and Head. E-mail: Sobhana@vsnl.com
Received October 5, 1999. Accepted October 31, 1999

Indian Journal of Gastroenterology 2000 Vol 19 April - June 91