unless those remaining are few or can be safely excised. Patients with visceral metastases (with or without skin, subcutaneous tissue or lymph node involvement) do very poorly.6 Survival after excision of metastases averages 4 to 8 months.1,2,5

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Correspondence to: Dr Mehta, A/12 Labh Sadan, Wamanrao Sawant Road, Dahisar (East), Mumbai 400 068
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Post cholecystectomy hemobilia: transcatheter embolization of pseudoaneurysms with homemade steel coils
RAJEED JAIN, YOGESH BATRA,*
SUBRAT KUMAR CHARYA*

Departments of Radiodiagnosis and *Gastroenterology,
All India Institute of Medical Sciences,
New Delhi 110 029

Two patients presented with hemobilia, one and two months following cholecystectomy. Angiography demonstrated pseudoaneurysms arising from the gastroduodenal and right hepatic arteries. Percutaneous transcatheter embolization of the pseudoaneurysms was successfully performed in both patients using homemade steel coils. [Indian J Gastroenterol 2002;21:161-162]

Key words: Cholecystectomy — complication

Post cholecystectomy hemobilia is a rare but almost invariably fatal cause of upper gastrointestinal bleeding.1 Due to the high success rates and low procedure-related morbidity, angiographic procedures are now the treatment of choice for such lesions.2 The widespread use of angiography has been inhibited by the cost of commercially available imported steel coils. We report two cases with post cholecystectomy hemobilia who were successfully managed using homemade steel coils.

Case 1: A 60-year-old woman underwent open cholecystectomy and bile duct exploration. She continued to have persistent drainage from the T-tube (250-400 mL) 15 days after surgery and was diagnosed to have a biliary fistula. She was readmitted for repair of the biliary fistula. One week after admission she developed fever, vomiting and epigastric tenderness, and later had a bout of fresh hemorrhage in the T-tube drain. Emergency angiogram revealed a bilobed pseudoaneurysm arising from the gastroduodenal artery and a wide communication of the aneurysm with the common bile duct (Fig). The mouth of the aneurysm was embolized with steel coils made from 0.015" conventional guidewire, using the technique described elsewhere.3 This resulted in complete occlusion of the aneurysm (Fig) and cessation of hemorrhage from the T-tube. The patient later underwent surgical repair of the biliary fistula and is well one year later.

Case 2: A 32-year-old woman presented two months after successful laparoscopic cholecystectomy with an episode of hematemesis and melena. On examination she was pale, icteric and normotensive. Side-viewing endoscopy and ERCP re-
Portal vein thrombosis following percutaneous ethanol injection therapy for hepatocellular carcinoma

DAIKI HABU, SHUHEI NISHIGUCHI, SUSUMU SHIOMI, AKIHIRO TAMORI, HIROKI SAKAGUCHI, TADASHI TAKEDA, SHUICHI SEKI, CHIKA ISHIBASHI, HITOSHI ASAI

Department of Hepatology and Central Clinical Laboratory, Graduate School of Medicine, Osaka City University; Osaka University of Education, Osaka, Japan

Percutaneous ethanol injection therapy was performed in a 66-year-old woman with hepatocellular carcinoma. She developed portal vein thrombosis that on color Doppler revealed no tumor vascular signal, and so was diagnosed as non-tumor thrombus. The thrombus resolved over 3 months. [Indian J Gastroenterol 2002;21:162-163]

Key words: Liver cancer, portal vein thrombus

Percutaneous ethanol injection therapy (PEIT) is widely used in the treatment of hepatocellular carcinoma (HCC). Portal vein thrombosis is a rare complication of PEIT. It is important to distinguish thrombus developing following PEIT from tumor thrombus due to invasion of HCC. We report a patient in whom color Doppler was useful in diagnosing portal thrombosis following PEIT.

A 66-year-old woman with Child A liver cirrhosis was admitted for evaluation of two hepatic tumors 30 mm and 15 mm in diameter detected on CT. At admission, there were no specific findings on physical examination. On laboratory examination, anti-HCV antibody was positive, serum albumin level was 3.8 g/dL, total bilirubin 1.0 mg/dL, prothrombin activity 150%, and alpha-fetoprotein 3998 ng/mL. Hepatic arteriography revealed the two tumors, and portal venography revealed no defect corresponding to the tumors.

Transarterial embolization therapy (TAE) was performed through the right hepatic artery; 50 mg doxorubicin hydrochloride, 10 mg mitomycin C, 5 mL iodized oil and fragments of gelatin were injected. Ten days later, abdominal CT revealed a lipiodol defect in the larger tumor. Ultrasonography (US) revealed a hypoechoic lesion in the same region as the lipiodol defect. Since TAE appeared not to be fully effective, 15 mL absolute ethanol was injected percutaneously into the lesion. After PEIT, no specific change was found in symptoms or laboratory data.

One week later, CT revealed a linear low-density area extending from the tumor to the hepatic trunks and a low-density area in the main portal vein (Fig). Since color Doppler revealed no tumor vascular signal around the hypoechoic mass in the main portal vein (Fig), we considered this to be a non-tumor thrombus. When we observed the patient in our outpatient clinic, CT and US revealed that the thrombus had increased in size and extended. Two months after PEIT, hepatic arteriography revealed no tumor stain in the thrombus in the portal vein. Portal venography revealed some defects but blood

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Correspondence to: Dr Acharya. Fax: (11) 685 2663. E-mail: subsakachiya@hotmail.com
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