Synchronous hepatocellular carcinoma and sigmoid colon metastasis presenting as liver and intra-abdominal abscesses

Yu-Jen Shih, Kuo-Feng Hsu, Jyh-Cherng Yu, De-Chuan Chan, Chung-Bao Hsieh

Division of General Surgery, Department of Surgery, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan, Republic of China.

To the Editor,

Hepatocellular carcinoma (HCC) is a common malignant tumor. The reported incidence of clinical HCC with GI tract invasion is 0.5-2% (1), and direct invasion to the colon is extremely rare (2). Extrahepatic metastasis to the distal sigmoid colon has never been reported before and HCC presenting as a liver abscess is also rare (3). Here, we report an extremely rare case of HCC with metastasis to the distal sigmoid colon, which initially presented as liver and intra-abdominal abscesses.

A 50-year-old man was admitted because of fever and abdominal pain that had persisted for 2 days. Physical examination revealed tenderness of the right upper

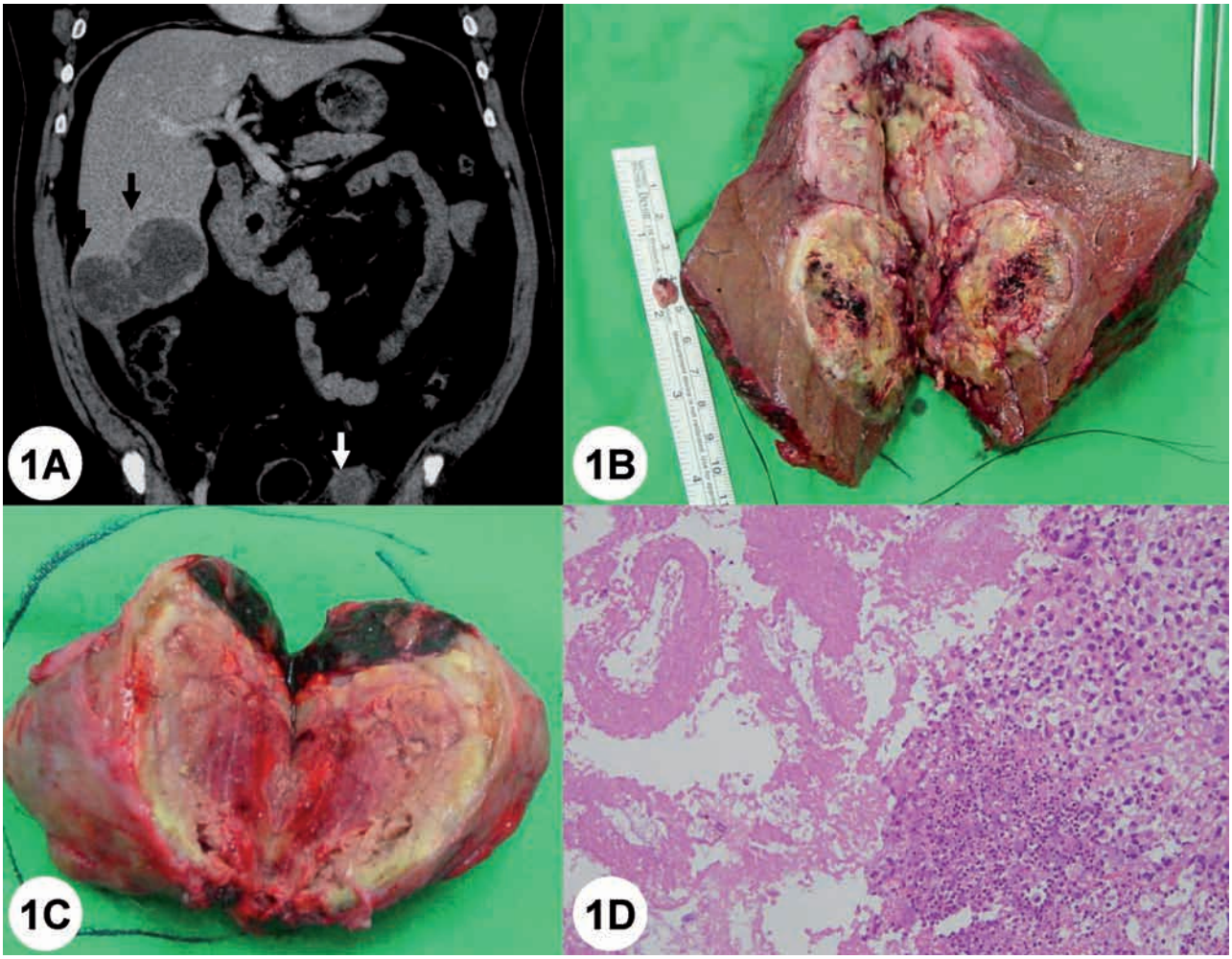

Fig. 1. (A) Computed tomography (CT) of the abdomen revealed 2 heterogeneous lesions in segment 6 of the liver, (6.7 and 5.4 cm ; black arrow) and another heterogeneous lesion attached to the wall of the sigmoid colon (5.2 cm ; white arrow). (B) Specimens showing 2 well-defined hepatic tumors (7 × 5 × 5 cm and 6 × 5 × 5 cm) with central necrosis (C) Specimens showing one tumor (5 × 4 × 4 cm) with nearly total necrosis from the sigmoid colon. (D) Poorly differentiated metastatic HCC of the sigmoid colon characterized by infiltration to the submucosa.

Correspondence to : Chung-Bao Hsieh, Division of General Surgery, Department of Surgery, Tri-Service General Hospital, No. 325, Cheng-Kung Rd, Sec 2, Neihu 114, Taipei, Taiwan. E-mail : albert0920@yahoo.com.tw

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abdomen and left lower abdomen. Laboratory data showed the following : white blood cell count, 11,200 cells/mL (81.3% neutrophils) ; C-reactive protein level, 9.35 mg/dL ; hepatitis B (HB) antigen negativity and antibodies to the hepatitis C (HC) viral negativity ; and normal alpha-fetoprotein levels. Abdominal computed tomography (CT) showed 2 heterogeneous lesions in segment 6 of the liver and one heterogeneous lesion in the sigmoid colon (Fig. 1A).

The liver abscesses were drained using a percutaneous transhepatic drainage tube. The drainage fluid culture revealed *Pseudomonas aeruginosa*, and ceftazidime was administered since the organism was sensitive to this antibiotic. Cytological examination of the abscess fluid did not show any malignant cells. An ultrasound performed 2 weeks later did not show any significant change in the abscesses. Exploratory laparotomy with segmentectomy of the liver and wedge resection of the sigmoid colon were then performed. Surgery revealed a large tumor with central necrosis in segment 6 of the liver and a small mass lesion in the sigmoid colon (Fig. 1B, 1C). Histological examination revealed a moderately to poorly differentiated HCC of the liver and a poorly differentiated metastatic HCC with infiltration to the submucosa of the sigmoid colon (Fig. 1D).

The most common extrahepatic sites of HCC metastasis are the lungs, abdominal lymph nodes, bones, brain, and adrenal glands (4). Extrahepatic metastasis to the GI tract is uncommon and is usually observed in the organs adjacent to the liver, such as the stomach, duodenum, and colon (1).

HCC presenting as liver abscess is extremely rare, and 5 cases have been reported by Okuda *et al*. (3). Diagnosis of HCC in these patients is very difficult and challenging, and the aspiration procedure may be helpful (5). Our patient had a rare form of HCC that manifested as liver abscess. The abscess was drained using a percutaneous transhepatic drainage tube. Cytological examination of the abscess fluid ruled out the presence of malignant cells. Subsequently, surgical intervention was considered because of the failure of conservative treatment.

Surgical resection is a suitable treatment for HCC with GI tract invasion because of the median survival time (6), but patients with metastatic HCC usually have a poor prognosis. We performed segmentectomy of the liver and wedge resection of the sigmoid colon for our patient with a tentative diagnosis of the liver and intra-abdominal abscesses. HCC with metastasis to the sigmoid colon was confirmed pathologically. Our patient died 6 months after the surgery because of tumor recurrence and disease progression.

We report the rare case of HCC with metastasis to the distal sigmoid colon presenting as liver and intra-abdominal abscesses. Percutaneous abscess drainage was initially advised. Surgical intervention was considered when the drainage procedure became ineffective. Furthermore, malignancy should be considered in liver abscess and cytology or pathology is necessary for prompt diagnosis.

References

1. LIN C.P., CHENG J.S., LAI K.H., LO G.H., HSU P.I., CHAN H.H. *et al*. Gastrointestinal metastasis in hepatocellular carcinoma : radiological and endoscopic studies of 11 cases. *J. Gastroenterol. Hepatol*., 2000, **15** : 536-41.
2. HIRASHITA T., OHTA M., IWAKI K., KAI S., SHIBATA K., SASAKI A. *et al*. Direct invasion to the colon by hepatocellular carcinoma : report of two cases. *World J. Gastroenterol*., 2008, **14** : 4583-5.
3. OKUDA K., KONDO Y., NAKANO M., KAGE M., ARAKAWA M., KOJIRO M. *et al*. Hepatocellular carcinoma presenting with pyrexia and leukocytosis : report of five cases. *Hepatology*, 1991, **13** : 695-700.
4. NAKASHIMA T., OKUDA K., KOJIRO M., JIMI A., YAMAGUCHI R., SAKAMOTO K. *et al*. Pathology of hepatocellular carcinoma in Japan. 232 Consecutive cases autopsied in ten years. *Cancer*, 1983, **51** : 863-77.
5. HUANG C.I., WANG L.Y., YEH M.L., HSIEH MY., HUANG J.F., LIN Z.Y. *et al*. Hepatocellular carcinoma associated with liver abscess. *Kaohsiung J. Med. Sci*., 2009, **25** : 537-43.
6. FUJII K., NAGINO M., KAMIYA J., UESAKA K., SANO T., YUASA N. *et al*. Complete resection of hepatocellular carcinoma with direct invasion to the stomach remnant. *J. Hepatobiliary Pancreat Surg*., 2004, **11** : 441-4.