

## Late retroperitoneal recurrence of hepatocellular carcinoma 12 years after initial diagnosis

Tiffany Cho-Lam Wong, Ka-Fai To, Simon See-Ming Hou, Sidney Kam-Hung Yip, Chi-Fai Ng

Tiffany Cho-Lam Wong, Simon See-Ming Hou, Sidney Kam-Hung Yip, Chi-Fai Ng, Department of Surgery, Prince of Wales Hospital, The Chinese University of Hong Kong, Shatin, Hong Kong, China

Ka-Fai To, Department of Anatomical and Cellular Pathology, The Chinese University of Hong Kong, Shatin, Hong Kong, China

**Author contributions:** Wong TCL drafted the manuscript; To KF was responsible for the histological figure and genetic assessment of the specimens; Ng CF supervised and assisted the manuscript preparation; Hou SSM and Yip SKH were involved in revising the manuscript critically; all authors have approved the final manuscript to be published.

**Supported by** Departmental research fund, Division of Urology, Department of Surgery, The Chinese University of Hong Kong, China

**Correspondence to:** Chi-Fai Ng, Professor, MBChB, FRCSEd, FCSHK, FHKAM (Surgery), Department of Surgery, Prince of Wales Hospital, The Chinese University of Hong Kong, Shatin, Hong Kong, China. [ngcf@surgery.cuhk.edu.hk](mailto:ngcf@surgery.cuhk.edu.hk)

Telephone: +852-26322625 Fax: +852-26327974

Received: January 11, 2010 Revised: February 9, 2010

Accepted: February 16, 2010

Published online: May 7, 2010

### Abstract

Hepatocellular carcinoma (HCC) is an aggressive tumor with poor long-term prognosis. Here, we present an unusual patient with a solitary recurrence of HCC in the right kidney 12 years after the initial diagnosis. This illustrates the importance of considering late recurrence in patients with a history of HCC and the management of these metastases.

© 2010 Baishideng. All rights reserved.

**Key words:** Hepatocellular carcinoma; Late recurrence; Metastasis; Retroperitoneal

**Peer reviewers:** Antonio Basoli, Professor, General Surgery "Paride Stefanini", Università di Roma - Sapienza, Viale del

Policlinico 155, Roma 00161, Italy; Giuseppe Currò, MD, University of Messina, Via Panoramica, 30/A, 98168 Messina, Italy

Wong TCL, To KF, Hou SSM, Yip SKH, Ng CF. Late retroperitoneal recurrence of hepatocellular carcinoma 12 years after initial diagnosis. *World J Gastroenterol* 2010; 16(17): 2187-2189 Available from: URL: <http://www.wjgnet.com/1007-9327/full/v16/i17/2187.htm> DOI: <http://dx.doi.org/10.3748/wjg.v16.i17.2187>

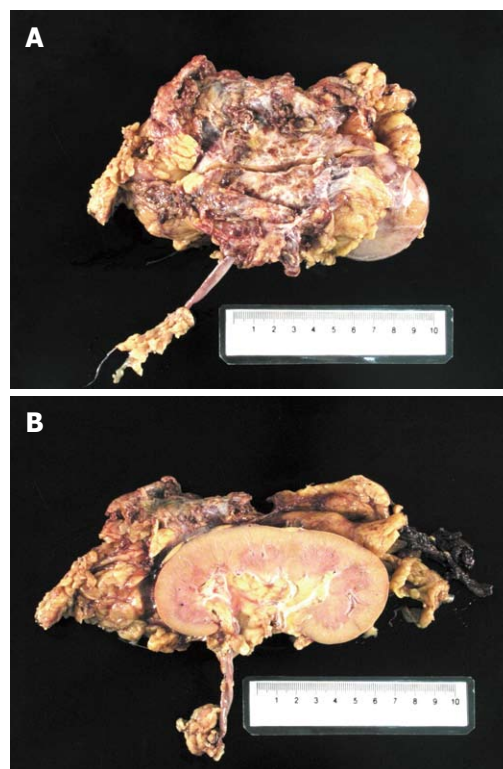
### INTRODUCTION

Hepatocellular carcinoma (HCC) is an aggressive tumor with poor long-term prognosis. The reported 5-year recurrence rate ranges from 75% to 100%<sup>[1]</sup>. Therefore, extrahepatic metastasis of HCC is uncommon due to the highly malignant nature of the primary tumor. However, with advances in different treatment modalities for HCC, the incidence of extrahepatic metastasis appears to be increasing<sup>[2]</sup>. Nevertheless, most recurrences occur relatively early after the initial diagnosis and treatment. Here, we report a patient who presented with a renal tumor 12 years after the initial treatment of primary HCC, which turned out to be a solitary recurrence of the initial HCC. The management of these distant metastases is also highlighted.

### CASE REPORT

A 61-year-old man who was a chronic hepatitis B carrier with Child's A liver cirrhosis, first presented 12 years ago with hemoperitoneum secondary to ruptured HCC. Emergency laparotomy for hemostasis was performed. Non-anatomical resection of the liver tumor was subsequently performed 1 mo later after his condition was optimized. Pathology showed an 8 cm × 6 cm × 4 cm, moderately differentiated HCC with a clear resection

However, the subsequent unexpected pathology was found to be extra-hepatic metastasis of HCC at Gerota's fascia. Macroscopically, the tumor was in the perinephric fat with no invasion to the renal capsule (Figure 2). Microscopic examination showed trabeculae of polygonal eosinophilic tumor cells, with epithelial cohesion, marked pleomorphism, associated with sinusoidal-type vascular channels and bile canaliculi were also identified. The kidney and pelvi-calyceal system were intact. When compared with the previously resected HCC 12 years



After nephrectomy, the patient's serum AFP level dropped to 1 ng/mL, i.e. normal. As there was no evidence of other systemic recurrence, no adjuvant chemotherapy was administered. The patient remained well 18 mo after the nephrectomy and serum AFP remained normal. The latest positron-emission tomography per-

formed at 1 year after nephrectomy showed no evidence of recurrence.

## DISCUSSION

In the past, extrahepatic metastasis of HCC was considered a relatively uncommon phenomenon, owing to the highly malignant nature of the primary tumor. Nonetheless, with advances in treatment for HCC, its overall prognosis is improving and the incidence of extrahepatic metastasis appears to be increasing<sup>[3]</sup>. The commonest sites of extrahepatic metastases are lung, lymph node and bone followed by adrenal glands<sup>[4-6]</sup>. Extrahepatic metastasis can occur *via* three routes: hematogenous (56%), lymphogenous (27%) and direct invasion (22%) and more than one mode of spread can occur<sup>[7]</sup>. It is uncommon for HCC to spread to kidney and most believe that tumor spread to the kidneys is *via* the hematogenous route<sup>[8]</sup>. In our patient, the metastasis spread to the perinephric tissue without direct invasion of kidney parenchyma. It was postulated that the initial rupture of the primary liver tumor resulted in some seeding of tumor cells in the retroperitoneal region giving rise to subsequent tumor recurrence.

However, it is still extremely rare to have recurrent HCC 12 years after the initial diagnosis and treatment. The reported median duration between initial treatment for HCC to extrahepatic spread is 23.2 mo<sup>[1]</sup>. While there was a report suggesting that HCC can recur more than 6 years after initial management<sup>[9]</sup>, there are no reports of recurrence occurring 10 years after initial treatment. It is difficult to explain the exceptionally long time lapse between treatment of the primary tumor and the current recurrence in our patient. It can not be explained even by shed cells belonging to a very low malignant clone of tumor cells.

Although there is no standard management protocol for patients with extrahepatic metastasis of HCC, it is generally believed that aggressive treatment for extrahepatic metastasis can prolong survival in selected patients with good performance status and limited volume of recurrence. In a review of patients with both intrahepatic and extrahepatic recurrent HCC, patients who received an aggressive combination of metastatectomy and locoregional therapy, with or without systemic therapy, had a better survival rate compared to those who received only non-surgical treatment (median survival after recurrence was 44.0 mo in the aggressive treatment group *vs* 10.6 mo in the non-surgically treated group)<sup>[2]</sup>. For patients with lung metastasis, it was also shown that a longer disease-free interval from primary treatment and a smaller number of metastasis (less than three) were as-

sociated with better prognosis<sup>[10]</sup>. In our patient, the solitary nature and long disease-free interval were relatively good prognostic factors.

Certainly, a more frequent follow-up protocol, especially imaging, may help to detect the lesion at an earlier stage. However, a careful balance between the yield and medical cost is needed, as late recurrence of HCC after a disease-free period of 5 years is still a very rare condition.

Our case illustrates that, in managing patients with a past history of HCC who present with new mass lesions, the diagnosis of extra-hepatic metastasis should always be suspected. Although the final treatment might not be altered, the diagnosis of metastatic HCC would allow better surgical planning and counseling for the patient.

## REFERENCES

- 1 **Ishii H**, Furuse J, Kinoshita T, Konishi M, Nakagohri T, Takahashi S, Gotohda N, Nakachi K, Yoshino M. Extrahepatic spread from hepatocellular carcinoma: who are candidates for aggressive anti-cancer treatment? *Jpn J Clin Oncol* 2004; **34**: 733-739
- 2 **Poon RT**, Fan ST, O'Suilleabhain CB, Wong J. Aggressive management of patients with extrahepatic and intrahepatic recurrences of hepatocellular carcinoma by combined resection and locoregional therapy. *J Am Coll Surg* 2002; **195**: 311-318
- 3 **Kanda M**, Tateishi R, Yoshida H, Sato T, Masuzaki R, Ohki T, Imamura J, Goto T, Yoshida H, Hamamura K, Obi S, Kanai F, Shiina S, Omata M. Extrahepatic metastasis of hepatocellular carcinoma: incidence and risk factors. *Liver Int* 2008; **28**: 1256-1263
- 4 **Tanaka K**, Shimada H, Matsuo K, Takeda K, Nagano Y, Togo S. Clinical features of hepatocellular carcinoma developing extrahepatic recurrences after curative resection. *World J Surg* 2008; **32**: 1738-1747
- 5 **Uka K**, Aikata H, Takaki S, Shirakawa H, Jeong SC, Yamashina K, Hiramatsu A, Kodama H, Takahashi S, Chayama K. Clinical features and prognosis of patients with extrahepatic metastases from hepatocellular carcinoma. *World J Gastroenterol* 2007; **13**: 414-420
- 6 **Natsuizaka M**, Omura T, Akaike T, Kuwata Y, Yamazaki K, Sato T, Karino Y, Toyota J, Suga T, Asaka M. Clinical features of hepatocellular carcinoma with extrahepatic metastases. *J Gastroenterol Hepatol* 2005; **20**: 1781-1787
- 7 **Texler ML**, Pierides J, Maddern GJ. Case report: A hepatocellular carcinoma metastasis in the distal pancreas. *J Gastroenterol Hepatol* 1998; **13**: 467-470
- 8 **Lo CM**, Lai EC, Fan ST, Choi TK, Wong J. Resection for extrahepatic recurrence of hepatocellular carcinoma. *Br J Surg* 1994; **81**: 1019-1021
- 9 **Schreibman IR**, Bejarano P, Martinez EJ, Regev A. Very late recurrence of hepatocellular carcinoma after liver transplantation: case report and literature review. *Transplant Proc* 2006; **38**: 3140-3143
- 10 **Kuo SW**, Chang YL, Huang PM, Hsu HH, Chen JS, Lee JM, Lee PH, Lee YC. Prognostic factors for pulmonary metastasectomy in hepatocellular carcinoma. *Ann Surg Oncol* 2007; **14**: 992-997

S- Editor Wang JL L- Editor Webster JR E- Editor Zheng XM