

Back pain as first presentation of Hepatocellular Carcinoma

Anil Kumar, Ikhwan Sani Mohamad, Maya Mazuwin Yahya, Leow Voon Meng, Zaidi Zakaria

Hepatocellular Carcinoma (HCC) is known to be one of the leading causes of deaths globally. In Malaysia HCC is known to be the eight most common cancer in both genders and the fifth most common cancer for males.

The etiological factors associated with HCC are chronic Hepatitis B or C viral infection, liver cirrhosis and nonalcoholic fatty liver disease. Patients with HCC usually present with right upper quadrant pain, jaundice, loss of weight, and a palpable mass over the right hypochondrium.

This case report will describe and discuss about the diagnosis of HCC in a patient with an atypical presentation of back pain which was confirmed with supportive findings of CT scan and MRI liver.

Anil Kumar MD

Department of Surgery, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

Ikhwan Sani Mohamad* MD

Department of Surgery, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
ikhwansani@yahoo.com.my

Maya Mazuwin Yahya MD

Department of Surgery, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

Leow Voon Meng MD

Department of Surgery, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Advanced Medical and Dental Institute, Universiti Sains Malaysia, Pulau Pinang, Malaysia.

Zaidi Zakaria MD

Department of Surgery, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

*Corresponding author

INTRODUCTION

Hepatocellular Carcinoma (HCC) is known to be one of the leading causes of deaths globally. In Malaysia HCC is known to be the eight most common cancer in both genders and the fifth most common cancer for males.¹

The etiological factors associated with HCC are chronic Hepatitis B or C viral infection, liver cirrhosis and nonalcoholic fatty liver disease. Patients with HCC usually present with right upper quadrant pain, jaundice, loss of weight, ascites and a palpable mass over the right hypochondrium.² Hepatocellular carcinoma is commonly diagnosed after the symptoms have presented or usually in intermediate or end stage of HCC. If early diagnosis was done and treatment was received, the survival rate could increase up to 50%.³

CASE REPORT

A 58-year-old gentleman presented to our hospital with complaint of severe back pain for the past 5 months. The pain was described as dull persistent in nature which was relieved by analgesics and leaning forward. On further questioning the patient also claimed to have significant loss of weight over the past 1 month. The patient had no history of alcohol consumption and family history of malignancy.

Abdominal examination revealed hepatomegaly with an ill-defined liver border.

There was no clinical evidence of ascites or other stigmata of chronic liver disease.

The biochemical parameters revealed normal liver function test. Serological findings including of hepatitis B was positive. The alpha fetoprotein was markedly elevated with value of 24 980 ng/ml (N:<8.5 ng/ml) .

The patient was subjected for a CECT Liver 4 phase. The findings included: large ill-defined peripherally enhancing mass occupying segment 5 and 6 measuring 6x13x7cm (Figure 1). Central hypodensity seen within the mass suggestive of necrotic areas. This mass medially involves the head of the pancreas and laterally displays a poor fat plane with the adjacent D2 segment of the duodenum. Filling defect seen within the right posterior portal vein was suggestive of thrombosis. Multiple enlarged matted lymph nodes in the porta hepatis, paracaval, aortacaval and paraaortic areas at the level of the renal veins. Hyperdense lesion was also present at body of Lumbar (L2) Vertebrae (Figure 2).

The case was diagnosed as multicentric advanced hepatocellular carcinoma with nodal, bone (L2) and pancreatic involvement. An ultrasound guided liver biopsy was subsequently done and the results were suggestive of a moderately differentiated HCC.

Figure 1 Coronal cut of arterial phase of CT abdomen showing segment 6 Liver Lesion (arrow).

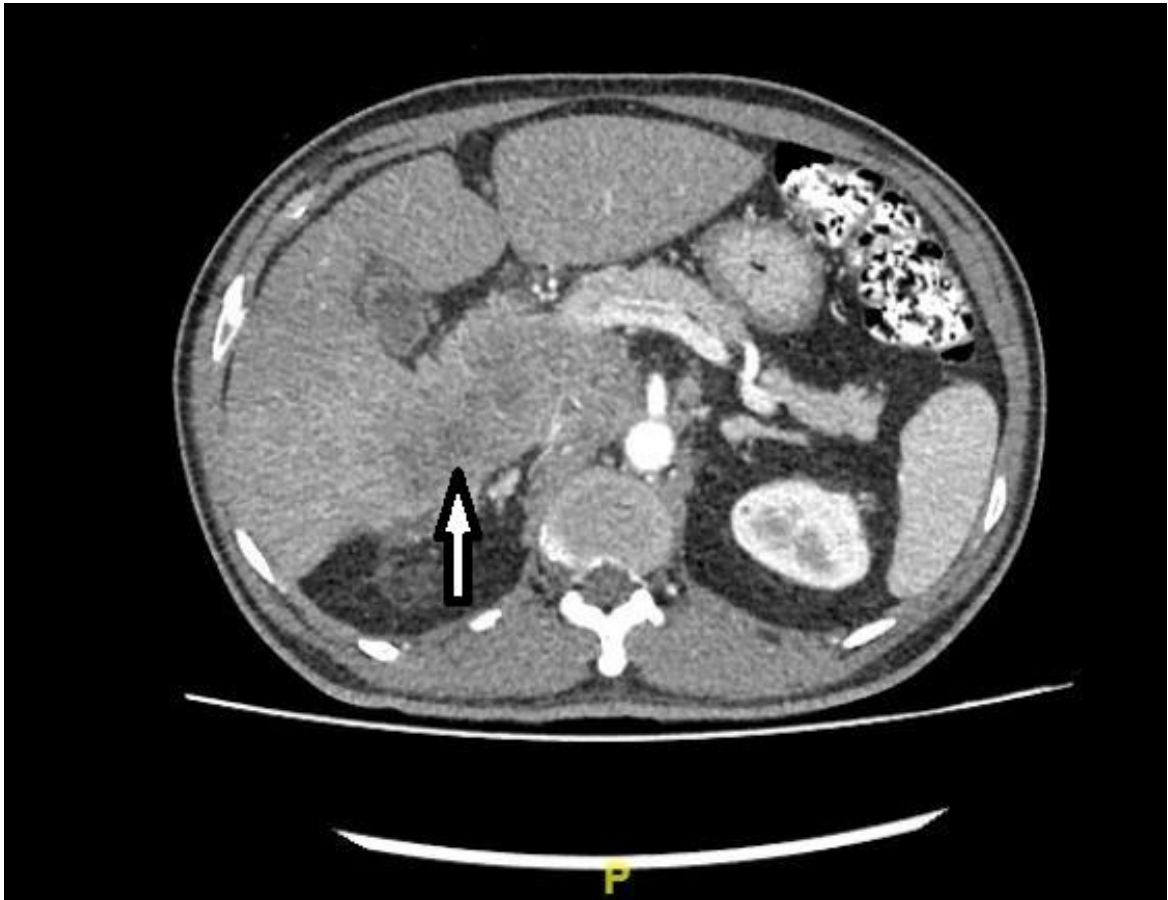
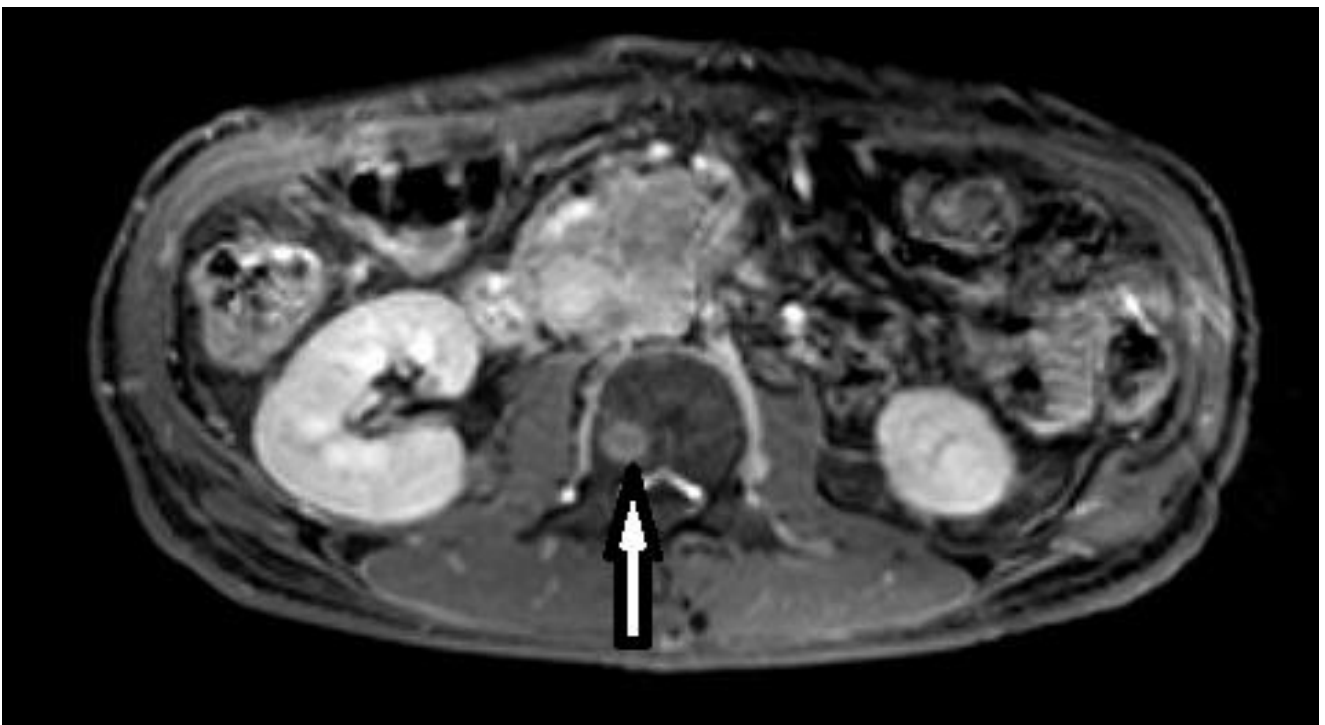


Figure 2 L2 Vertebral body lesion (arrow).



DISCUSSION

In normal circumstances, the prostate, breast, kidney, lung, and thyroid are the most frequently encountered cancers that metastasize to the bone.⁴ The bone metastasis from HCC is considered rare unless it is due to local infiltration by adjacent liver mass. In this particular case, the CT Liver 4 Phase, MRI liver and the elevated AFP level were highly suggestive of HCC.

Bone metastasis as the first sign of extrahepatic HCC very seldom occurs. Due to this there has only been a few case reports that has been reported. In one study which included 149 patients with extrahepatic metastasis of HCC, the most frequently involved sites of extrahepatic metastasis were lung, lymph node, musculoskeletal, and adrenal gland in order of frequency.⁴ Most of the musculoskeletal involvements (66%) already had multiple other no osseous sites of metastatic disease at the time of presentation of the first documented extrahepatic HCC. However, isolated bone metastasis as the first manifestation was only seen in 14 out of 149 (9.5%) patients. The most frequently involved location was the lumbosacral and thoracic spine.^{3,5}

The pathogenic mechanism of spinal metastasis are as follows: (1) The coexistence of pulmonary and brain metastases supports the conclusion of dissemination through the arterial route; (2) the other is spread through the vertebral venous plexus, extending from the pelvis to the cranial venous sinuses, enabling retrograde transportation to the

spinal cord; (3) direct invasion from contiguous structures; and (4) intraspinal dissemination.³ Since symptoms attributable to HCC are usually absent in early stage, liver ultrasonography and serum AFP are used for the surveillance of HCC in high risk group. Positivity for viral markers, larger tumour diameter, multiple tumour nodules, the presence of vascular invasion, and the elevated tumour markers were associated with the development of extrahepatic metastasis. Most of HCC occurs on the background of chronic liver disease including chronic hepatitis B and hepatitis C viral infection and alcoholic liver disease ultimately followed by cirrhosis. However, NAFLD, the hepatic manifestation of obesity and related metabolic disorders, is now a known-risk factor of cryptogenic cirrhosis and HCC.³

We presented our experience of a rare case of HCC in a noncirrhotic liver, presenting as chronic back ache with an isolated lumbar vertebrae metastasis as the sole manifestation in patient with well-known risk factor. This case suggests that HCC should be considered as one of differential diagnosis in patient which presents with spine metastasis, even in the absence of liver cirrhosis.

CONCLUSION

Extra hepatic metastasis of Hepatocellular Carcinoma is not rare. HCC should be included in the differential diagnosis of spinal metastasis because in some cases it may be the initial manifestation of HCC, with or without signs of liver disease as occurred in our patient.

REFERENCES

1. Rasul KI, Napaky SM, Feilchenfeldt JW, Baco A. Hepatocellular Carcinoma with Rare Clinical Presentation. *Ann Clin Hepatol.* 2018; 2(1): 1007.
2. Katyal S, Oliver III JH, Peterson MS, Ferris JV, Carr BS, Baron RL. Extrahepatic metastases of hepatocellular carcinoma. *Radiology* 2000; 216 (3) : 698–703
3. Raihan R, Azzeri A, Shabaruddin F, Mohamed R. Hepatocellular Carcinoma in Malaysia and Its Changing Trend. *Euroasian J Hepatogastroenterol.* 2018 Jan-Jun;8(1):54-56
4. Bae S, Kim H, Oh H, Kwon M, Lee J, Park M, Sohn B. Multiple Bone Metastases as the First Manifestation of Hepatocellular Carcinoma in Patient with Noncirrhotic Liver. *Case Reports in Oncological Medicine* 2015, 512849,1- 5
5. Lin C, Chang W, Lu C, Tsai N, Lui C, Chuang Y, Huang C, Chen S, Chang C, Wang H, Yang T, Hsieh M. Clinical Characteristics of Spinal Involvement in Hepatocellular Carcinoma. *Acta Neurol Taiwan.* 2009 Dec;18(4):255-61