Hepatocellular Carcinoma

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Citation

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Abstract

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TO THE EDITOR

Working at an university-based teaching hospital that is actively involved with liver disease and its complication, hepatocellular cancer, we often encounter clinical uncertainty about this disease entity amongst primary care physicians and general internists. Below are five questions and answers in a “nutshell:”

1. How significant is hepatocellular carcinoma (HCC)?

HCC is the second leading cause of cancer-related deaths worldwide in men and the 6th leading cause in women (1). The ten year increase in prevalence proportion of HCC is more than double that of any other cancer in Canada (2). Risk of HCC is highest in men, at advanced age, with chronic hepatitis B (HBV) or cirrhosis (particularly from hepatitis C in Canada).

2. Who should be screened for HCC and how should they be screened?

Among chronic HBV carriers, men ≥ 40 years of age, women ≥ 50 years of age, patients of African descent, with cirrhosis or a family history of HCC, are recommended for abdominal ultrasound at 6 months intervals for HCC screening. Patients with cirrhosis from hepatitis C, alcoholic liver disease, genetic hemachromatosis, and likely non-alcoholic fatty liver disease should similarly be screened (3).

The issue of screening with alpha fetoprotein is controversial. A randomized control trial of >18000 Chinese chronic HBV carriers reported abdominal ultrasound and serum alpha feta protein (AFP) at 6 months interval resulted in a 37% relative reduction in HCC-specific mortality compared to no screening (4). However, the limited sensitivity and specificity of AFP has excluded it from current screening recommendations (3). Figure 1 highlights the HCC diagnostic algorithm.

3. How is HCC staged and what are the surgical treatment options?

Multidisciplinary management and prognosis of HCC is based on the Barcelona Clinic Liver Cancer (BCLC) staging system (3). Resection is optimal for single or multiple lesions in close anatomical proximity in noncirrhotics or Child Pugh A patients without portal hypertension, but recurrence risk is high. HCC within the Milan criteria (solitary tumor ≤5cm or three nodule ≤3cm) should be assessed for liver transplantation (3). Some transplant centres will allow transplantation of HCC beyond Milan criteria.

4. Are there non-surgical treatment options?

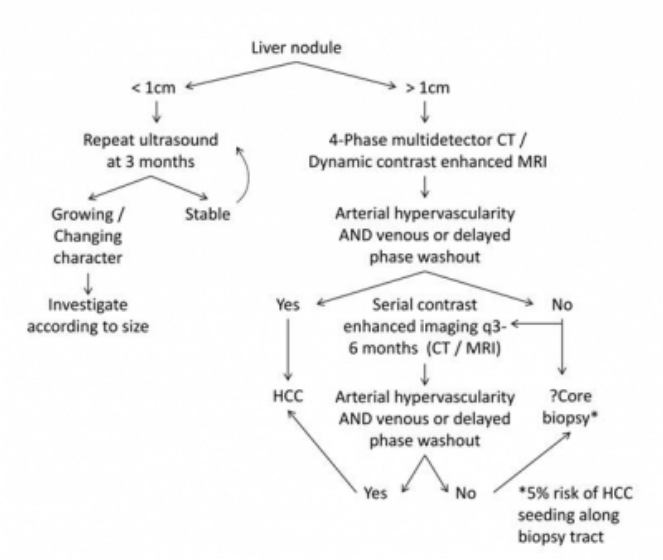
Nonsurgical locoregional therapy includes radiofrequency ablation (RFA) and transarterial chemoembolization (TACE). RFA is a potentially curative treatment for solitary HCC not candidate for resection or liver transplant. TACE relies on injection of chemotherapeutic agents into the hepatic artery, the main vascular supply to HCC, which is then embolized to induce tumor necrosis, and is suitable for multifocal disease without portal vein invasion (3).

5. Is there chemotherapy for HCC and is there any benefit?

Sorafenib, an oral multitargeted tyrosine kinase inhibitor, is indicated for metastatic HCC
The SHARP trial reported Child Pugh A patients with unresectable HCC randomized to sorafenib had two months longer time to radiographic progression and median survival than placebo (5).

Figure 1

Adapted from Bruix J, Sherman M. American Association for the Study of Liver Diseases. Management of hepatocellular carcinoma. Hepatology. 2011.



Sincerely,
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References

1. Jemal A, Bray F, Center MM, Ferlay J, Ward E, Forman D. Global cancer statistics. CA Cancer J Clin. 2011;61:69-90.

2. Ellison LF, Wilkins K. Statistics Canada. Canadian trends in cancer prevalence. Health Reports. 2012;23:1-10.

3. Bruix J, Sherman M. American Association for the Study of Liver Diseases. Management of hepatocellular carcinoma. Hepatology. 2011;53:1020-2.

4. Zhang BH, Yang BH, Tang ZY. Randomized controlled trial of screening for hepatocellular carcinoma. J Cancer Res Clin Oncol. 2004;130:417-22.

5. Llovet JM, Ricci S, Mazzaferro V, Hilgard P, Gane E, Blanc JF, de Oliveira AC, Santoro A, Raoul JL, Forner A, Schwartz M, Porta C, Zeuzem S, Bolondi L, Greten TF, Galle PR, Seitz JF, Borbath I, Häussinger D, Giannaris T, Shan M, Moscovici M, Voliotis D, Bruix J; SHARP Investigators Study Group. Sorafenib in advanced hepatocellular carcinoma. N Engl J Med. 2008;359:378-90.

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