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Case Report Open Access

An Unusual Case: Gastric Metastasis of Hepatocellular Carcinoma

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Abstract

Introduction: Gastrointestinal tract involvement of hepatocellular carcinoma (HCC) is a rare entity with a poor prognosis and can occur via hematogenous route or direct invasion. Here we report a case with de novo HCC after liver transplantation who had rising alfa-fetoprotein (AFP) levels and was found to have gastric metastases incidentally.

Case: A 62 year old man underwent liver transplantation with a diagnosis of hepatocellular carcinoma Three years after the liver transplantation, bone and liver metastasis developed and palliative treatment plan was made. During follow-up AFP levels began to rise subsequently and computed tomography of chest and abdomen revealed stable liver lesions and a suspicious gastric luminal nodule. Upper endoscopy showed polypoid lesions in stomach and the pathology of the biopsies taken from these lesions were consistent with HCC metastasis.

Discussion: Patterns of metastases in patients with recurrent HCC after liver transplantation might be different. Immunsuppressive treatment in transplant patients might have a negative effect on disease biology and may result in more disseminated disease and atypical sites of metastases as in our case. In patients with rising AFP in the absence of progressive disease on radiologic evaluation, gastrointestinal system metastases via hematogenous route should be kept in mind and upper endoscopy should be considered even in the absence of gastric symptoms, particularly if the presence of extrahepatic disease will change treatment decisions.

Keywords: Hepatocellular carcinoma; Liver transplantation; Gastric metastases

Introduction

Extrahepatic metastases of hepatocellular carcinoma (HCC) are observed frequently because of improved diagnostic methods and prolonged survivals achieved by contemporary treatment modalities. The most frequent metastatic sites of HCC are lungs, bone, lymph nodes and adrenal glands [1,2]. However, gastrointestinal tract involvement is a rare entity with a poor prognosis and can occur via hematogenous route or direct invasion [3]. Patients with chronic liver disease and HCC have upper endoscopy for various reasons and gastric metastases can be found incidentally, however those with HCC after liver transplantation, gastric metastases can be overlooked. Here we report a case with de novo HCC after liver transplantation that had rising alfa-fetoprotein (AFP) levels and was found to have gastric metastases incidentally.

Case Report

A 62 year old man with a diagnosis of hepatocellular carcinoma due to alcoholic liver disease underwent liver transplantation in September 2009. His immunsuppressive regimen consisted of sirolimus and tacrolimus. Three years after the liver transplantation, iliac bone metastasis developed, which was subsequently proven with biopsy. Palliative radiotherapy was given, sorafenib and zoledronate were initiated. Sixteen months later, multiple new metastatic lesions developed in liver. Four cycles of gemcitabine and oxaliplatin treatment was applied with no response. Radioembolization with Yttrium-90 was performed for liver metastasis and stable disease was achieved for 6 months. Alfa-fetoprotein levels began to rise subsequently and computed tomography (CT) of the chest and abdomen revealed stable liver lesions and a suspicious gastric luminal nodule (Figure 1). Upper endoscopy showed 4 polypoid lesions (1-4 cm in diameter) localized in cardia, fundus and corpus (Figure 2) and the biopsies taken from these lesions were consistent with HCC metastasis. Treatment with doxorubicine was commenced.

Discussion

Gastric metastases are quite rare and most common primary tumors are breast, melanoma and gastrointestinal carcinomas in western countries [4]. Hepatocellular carcinoma with gastrointestinal involvement has been reported in 4-10% of cases and mostly via direct invasion but hematogenous metastasis is rather rare [3]. Wu et al. evaluated patients with gastric metastatic lesions and found that among 18 patients, 6 had HCC as primary tumor. Such a high ratio was explained by relatively higher HCC incidence in Taiwan than western population [5]. In another study of 8267 patients with HCC, only seven cases (0.08%) were found to have gastric metastases. Since all had undergone transarterial chemoembolisation or esophageal variceal band ligation, the authors suggested that hepatofugal flow after embolization procedures might have been the causal pathway for gastric metastases [3]. Previously, only one case with gastric metastases

of HCC after liver transplantation was reported. That patient had presented with gastrointestinal bleeding [6].

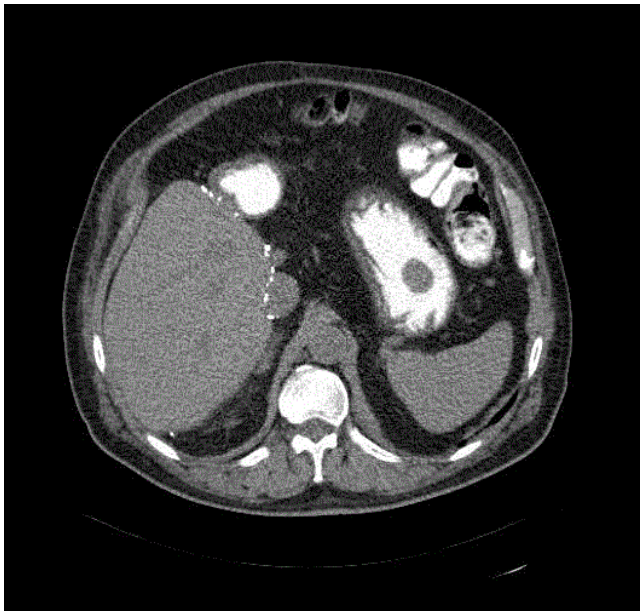

Figure 1: Abdominal computerised tomography that reveal gastric luminal nodule

Figure 2: Polipoid lesion in upper gastrointestinal endoscopy

Our case was asymptomatic and only AFP increase and radiological findings led to the diagnosis. Patterns of metastases in patients with recurrent HCC after liver transplantation might be different. No previous study has directly addressed metastases patterns comparatively. The largest series with post-transplant HCC recurrences included 63 patients. Fourteen patients (22%) had liver only recurrence, 10 patients (14%) had lung-only recurrence and 33 patients (52%) had recurrence on multiple sites [7]. On the other hand, another series which mostly included patients with de novo HCC showed that 26% of the patients had recurrence in multiple sites [1]. Immunsuppressive treatment in transplant patients might have a negative effect on disease biology and may result in more disseminated disease and atypical sites of metastases as in our case. Ong et al. reported a patient with renal metastasis of HCC [8] and Azarpira et al. also reported a case of skull metastasis of HCC, both being after liver transplantation and under immunsupressive treatment [9]. In another case report, it was mentioned that renal transplant recipients with multiple cutaneous squamous cell cancers tended to have an aggressive disease course with multiple metastases resulting in death [10]. This hypothesis might be tested in large retrospective series. Second, in patients with rising AFP in the absence of progressive disease in liver and other sites in CT scans, gastrointestinal system metastases via hematogenous route should be kept in mind and upper endoscopy should be considered even in the absence of gastric symptoms, particularly if the presence of extrahepatic disease will change treatment decisions.

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