Cutaneous Presentation of Hepatocellular Carcinoma: A Case Report

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Abstract

Hepatocellular carcinoma (HCC) is a malignant primary liver cancer often associated with a background of hepatitis B or C viral infection. Recently, other risk factors such as obesity, diabetes mellitus, and nonalcoholic fatty-liver disease have been recognized. In a small portion of patients, HCC metastasizes to the lung, intra-abdominal lymph nodes, bone, or adrenal gland. HCC rarely develops cutaneous metastases, and it is especially uncommon to acquire metastases to the skin of the face. Diagnosis of HCC generally occurs before metastasis to distant sites, and treatment is often limited to palliative measures once distant metastases occur. We present a patient with a history of fatty liver diagnosed with HCC after cutaneous metastasis to the face.

Introduction

Hepatocellular carcinoma (HCC), the most common primary liver cancer, is a malignant cancer that usually develops in a setting of chronic inflammation. The development of HCC is frequently a product of cirrhosis, which primarily occurs as a result of risk factors such as hepatitis B or C viral infection. Although significant risk factors for acquiring HCC, such as hepatitis B or C viral infection, have been well established, evidence is mounting for other risk factors such as obesity, diabetes mellitus, and nonalcoholic fatty-liver disease. It has been reported that HCC affects six per 100,000 people and is the most rapidly increasing cause of cancer-related death in the United States. With the rise of metabolic syndrome and associated conditions in the United States, HCC is becoming a significant source of morbidity and mortality.

The most common presenting symptoms of primary liver cancers are abdominal pain and weight loss. Patients regularly have other symptoms like fatigue or malaise, and infrequently present with a paraneoplastic syndrome or cutaneous features. A diagnosis of HCC coupled with metastasis to sites outside the liver occurs in approximately 5% to 15% of patients. In descending order, the lung, intra-abdominal lymph nodes, bone, and adrenal gland are the most common sites of metastasis. Internal malignancies rarely metastasize to the skin, and of those that do, HCC makes up only a small percentage. In one study reviewing 12,146 cases of internal malignancies, only 124 (1.02%) patients were found to have cutaneous metastases. HCC was found to have a rate of metastasis to the skin of 0.34%.

A wide range of treatment options are available for HCC. Tumor resection, radiofrequency ablation, and liver transplantation are some of the more radical treatment options. Treatments with a more palliative intention include trans-arterial chemoembolization, systemic chemotherapy, and intra-arterial radioembolization. Although many treatment options exist, median survival is about six to 20 months from diagnosis. HCC's high mortality rate highlights the importance of accurate and timely diagnosis. In this case report, we present a patient diagnosed with HCC after cutaneous metastasis to the face.

Case Report

After being referred from an urgent care facility, a 62-year-old Caucasian male presented with a skin lesion located on the superior medial forehead. The lesion had been present and slowly growing for four months. Mild bleeding occurred after scratching or picking the lesion, which led him to seek medical care. He had not been treated for this lesion before. Past medical history was significant for hypertension, dyslipidemia, elevated liver function tests, fatty liver (diagnosed two years prior to presentation), glucose intolerance, and basal cell carcinoma. Social history was significant for smoking approximately two cigarettes per day for 40 years, and drinking two-plus drinks per night for an unknown period of time. Other history was noncontributory. Medications were furosemide, losartan, and levothyroxine. Review of systems was significant for easy bleeding, easy bruising, and chronic lymphedema.

Physical exam showed two erythematous papules, one located on the superior mid-forehead, measuring 0.5 cm, and the other on the right nasal infratip, measuring 0.4 cm. The patient was not in acute distress, and the lesions were not actively bleeding. Two shave biopsies were conducted under the tentative diagnosis of a neoplasm of uncertain behavior. Each biopsy showed similar histologic findings strongly suggesting a carcinoma. A strong suggestion of hepatocytes was implied on routine staining, the cells were negative for cytokeratin 7, cytokeratin 20, and hepatocyte marker hepatocyte paraffin 1 (Hep Par 1) (Figure 4). The results strongly supported a diagnosis of metastatic HCC. A subsequent Fouchet’s stain confirmed intracellular bile, establishing the diagnosis of metastatic HCC (Figure 5).

Due to poor wound healing, multiple visits occurred after the initial diagnosis of metastatic HCC. The patient was referred to oncology, and CT revealed a 5.2 cm hypervascular mass and possibly another 1 cm hypervascular lesion in the liver. He was started on sorafenib 200 mg PO BID. The patient passed away within a year.
common diagnoses. The possibly relevance of a history of fatty liver, as elicited in this case, accentuates its importance in Western societies, as fatty liver is becoming progressively more common. In this case, chronic fatty liver was likely the main trigger of cirrhosis, which led to the HCC. Since the link between HCC and fatty liver is becoming stronger, it is reasonable to assume that more cases of HCC may be seen in the future throughout Western societies.

Although skin metastasis of HCC is rare, with more cases of HCC we may see more skin metastases. Furthermore, awareness of the possibility that HCC can metastasize to the skin could facilitate timely diagnoses and treatment. Bolstering the importance of this awareness is the fact that the prognosis of HCC is grim, with a median survival of six to 20 months. Even if treatment becomes palliative, a longer duration of palliative care can drastically improve end-of-life quality. While we can’t know how much longer the presented patient would have survived had he been diagnosed earlier, it is noteworthy that he was diagnosed with fatty liver two years before presentation, and he did not follow up on the presence of elevated LFTs, all of which occurred before the cutaneous metastasis.

Conclusion

HCC is an increasingly common cause of cancer-related death. Cutaneous metastasis from HCC is exceedingly rare, and almost all cases occur after a background of hepatitis B or C. The presented case differs in that the patient had a history of chronic fatty liver. He was diagnosed with HCC only after cutaneous metastasis. Metastatic cutaneous HCC to the nose seems to occur more often in men over the age of 50, though it is not understood why. With fatty liver becoming progressively more common in Western societies, it is important to be aware of its presentation in order to diagnose and treat the condition in a suitable fashion.

Discussion

HCC is an important source of morbidity and mortality; in the United States, it is the most rapidly increasing cause of death related to cancer. Cutaneous metastasis of HCC is rare. These characteristics underscore the importance of the case presented here. This case is delineated from the small number of other cutaneous metastases of HCC by a few other features. First, many of the cases of cutaneous metastasis of HCC have occurred after the initial diagnosis of the disease. Interestingly, almost all reported cases of extrapleural metastases and cutaneous metastasis of HCC have occurred with a background of hepatitis B or C infection. The patient in this case was diagnosed after the cutaneous presentation, and he was not documented to have a history of hepatitis B or C infection. The patient’s HCC was attributed to cirrhosis from a combination of fatty liver and possibly a small amount of alcohol use. In addition, only a few cutaneous metastatic HCC cases have reported lesions on the face. Few cases have reported HCC metastasis to the nose, but reports have documented that men older than 50 years old with cutaneous metastases of HCC have a higher predilection for HCC metastasizing to the face. It is not clear why this seems to occur in men older than 50 years. A possible theory is that areas with more sun exposure and UV radiation, such as the face, undergo additional changes in protein structures, which may augment HCC cells’ ability to bind to receptors in those areas.

The presented case reminds clinicians to be vigilant in their awareness of rare but increasingly

References


