

Case Report

Solitary skull metastasis as initial presentation of hepatocellular carcinoma

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Abstract

Hepatocellular carcinoma (HCC) is the most common primary tumor of liver. HCC usually metastasizes to regional lymph nodes and lungs, less commonly to bone and rarely to the skull. Herein we present a case of 73 year old gentleman who presented with an occipital swelling. CT head detected mass suggestive of hemangiopericytoma with a differential of metastasis and MRI showed heterogenous signal intensity mass probably metastasis. Cytological diagnosis revealed cranial metastasis. Subsequent CECT abdomen reported a 12x11x11 cm heterogenous enhancing mass suggestive of hepatocellular carcinoma. Patient was planned for craniectomy and transarterial chemoembolization to treat primary cancer but he refused further treatment inspite of extensive counseling. Primary presentation with skeletal metastases is rare in HCC and only few cases have been reported so far but it should be considered in the differential diagnosis in patients with subcutaneous scalp mass.

Keywords: Hepatocellular carcinoma, Skull metastasis

Introduction

Hepatocellular carcinoma (HCC) is the most common primary tumor of liver and is the fifth most common cancer in the world, especially prevalent in African and East Asia.¹ Late-stage HCC usually metastasizes to the regional lymph nodes and lungs, but less commonly to the skeleton.² Solitary skull metastasis from HCC prior to diagnosis of the primary tumor is a rare event.

Case presentation

Herein we present a case of 73 year old gentleman, who presented to neurosurgery outpatient department with a painless palpable parieto-occipital scalp lump of 5 months duration (Fig 1). He had no history of head trauma or other systemic complaints. Despite a history of alcohol consumption for past 30 years, there was no jaundice or prior liver disease. Laboratory test demonstrated normal liver function test and negative Serology but increase in AFP.



Fig 1: Parieto-occipital scalp mass

CT head detected mass suggestive of hemangiopericytoma with a differential of metastasis (Fig. 2) and MRI showed heterogenous signal intensity mass probably

metastasis (Fig.3).Cytological diagnosis revealed cranial metastasis. He was referred to our department for evaluation. Subsequent CECT abdomen reported a 12x11x11cm heterogenous enhancing mass in arterial phase in segment IVa, IVb, V and VIII suggestive of hepatocellular carcinoma(Fig. 4). Patient was planned for craniectomy and transarterial chemoembolization to treat primary cancer. However despite extensive counseling patient refused further treatment.

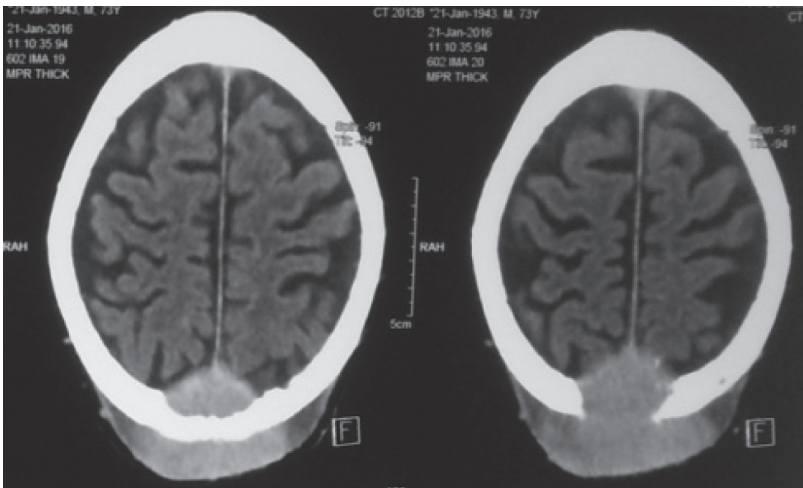


Fig 2: CT Head: Approx 5x5x5cm heterogenously enhancing lesion with underlying bone erosion suggestive of hemangiopericytoma with a differential of metastasis

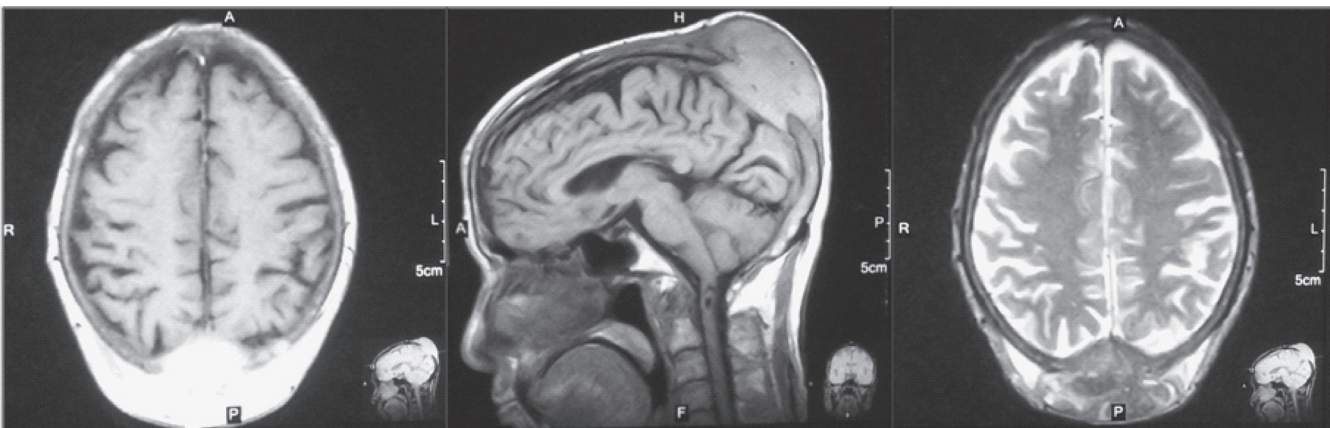


Fig 3: MRI Brain: Ill defined heterogenous signal intensity mass in postero-superior scalp probably metastasis

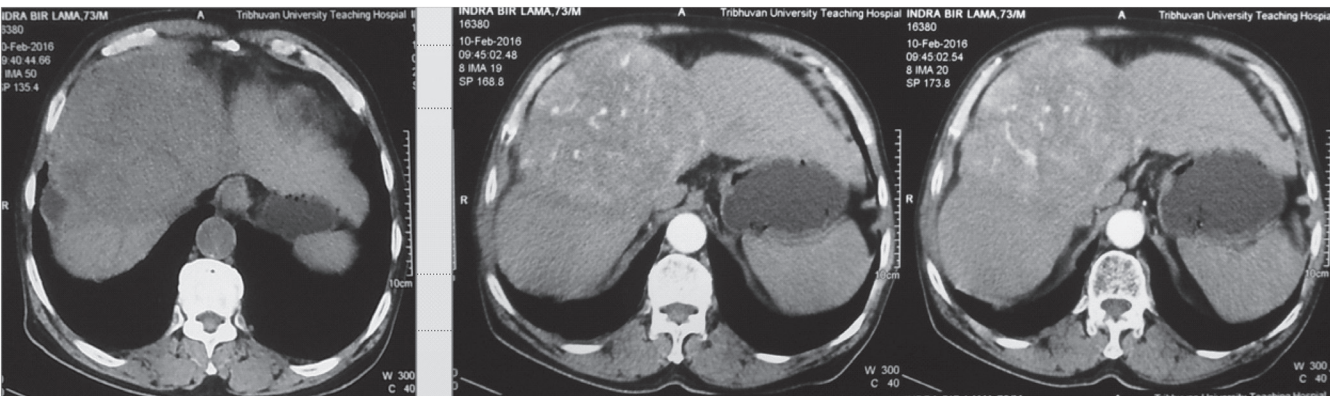


Fig 4: CECT Abdomen: Approx 12x11x11cm heterogenous enhancing mass in segment IVa, VIb, V and VIII with enhancement in arterial phase suggestive of hepatocellular carcinoma with metastasis

Discussion

HCC is one of the most common cancers worldwide and extrahepatic metastases generally occur late in the course of the disease. The incidence of skeletal metastasis from HCC is estimated to be 2%–16%³ and skull metastasis is even rarer with a reported incidence of 0.5–1.6 % and occurs in advanced systemic disease.⁴

Metastases from HCC may occur through the hematogenous route via lungs to the brain parenchyma without skull involvement whereas dissemination of HCC cells to the vertebrae through the portal vein-vertebral vein plexuses may lead to a higher incidence of bone metastasis.⁵ In review of published literature, a total of 59 patients with skull metastasis from HCC were found until 2014.⁶ The incidence of skull metastasis from HCC has significantly increased mainly because of the prolonged survival rate of HCC patients due to the recent progress in diagnosis of the primary lesion.

Treatment for skull metastasis includes radiotherapy, chemotherapy, surgery and palliative care in order to reduce the risks of neurological sequelae and to improve quality of life.⁷ Resection of the skull metastases is acceptable for preventing intracranial hemorrhage and neurological deterioration. We advised for surgery for skull metastasis and trans-arterial embolization for the primary lesion but patient refused further management in spite of repeated counseling.

Conclusion

Primary presentation with skull metastases is rare in HCC but it should be considered as a differential diagnosis in patients with scalp mass.

Conflict of interest: None declared.

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