Case Report

Hepatocellular carcinoma with cutaneous metastasis

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ABSTRACT

We report a 60-year-old male patient with hepatocellular carcinoma (HCC) who presented with cutaneous metastasis of the chest wall and ribs destruction. The tumor was advanced, and the patient died next day.

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Most patients with hepatocellular carcinoma (HCC) present at an advanced stage where little can be offered to them. However, palliative procedures such as radiotherapy, percutaneous radio frequency ablation, percutaneous ethanol injection, percutaneous cryosurgery, cytoablation, microwave coagulation therapy, and transcatheter arterial embolization are useful and may improve the quality of life of the patients with advanced or metastatic disease. The lungs, abdominal lymph nodes and bones are the most common sites of extrahepatic metastases of HCC. Cutaneous metastasis from HCC is very rare. The prognosis in patients with extrahepatic metastases is poor, and there is no effective treatment.

Case Report. A 60-year-old male patient was referred to our centre as a case of confirmed hepatocellular carcinoma (HCC) for further management. The patient's family gave a 4 months history of decreased level of consciousness, progressive jaundice and loss of appetite. The patient was also complaining of a non traumatic left sided chest wall swelling of 2 months duration. There was no past history of schistosomal infestation, jaundice, alcohol consumption, blood transfusion or use of hepatotoxic drugs. There was no family history of such an illness or a history of a neoplastic disease. The patient had cholecystectomy 10 years back without complications. Systemic review was unremarkable.

On examination, the patient looked ill, cachectic, deeply jaundiced with clubbing of the fingers and flapping tremors of the hands. Otherwise, his vital signs were stable. There was a 13 cm rounded, non tender, hard, fixed mass located above the left breast and extending to the left axilla. Abdominal examination showed a huge hard epigastric mass. His investigations on admission were as follows: Hemoglobin 8.6 (14-18 g/dL), white blood count 7.2 (4.8-10.8 x 109/L), platelets 78 (130–400 x 109 /L), erythrocyte sedimentation rate 42 mm/hour, sodium 137 (135-145 mmol/L), potassium 7.6 (3.5-5.0 mmol/L), BUN 100 (3.0-6.5mmo/L), creatinine 222 (60-120 mmol/L), blood glucose 1.7 (3.0 -6.0 mmol/L), total serum bilirubin 284 (5-17 umol/L), serum albumin 24 (35-50 g/L), Serum glutamic-oxaloacetic transaminase (SGOT) 866 (5-50 iu/L), serum glutamic-pyruvic transaminase (SGPT) 211 (5-55 iu/L), lactate dehydrogenase (LDH) 15730 (100-225 iu/L), alkaline phosphatase 570 (35-105 iu/L), prothrombin time 63/16.3 seconds, partial thromboplastin time 44/33 seconds and international normalized ratio (INR) 5.6. The

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serology for hepatitis C virus antibodies was positive but negative for hepatitis B and human immuno-deficiency virus. The serum alpha-fetoprotein (AFP) was >350 (<10.0 nG/ml).

A chest x-ray showed a huge, homogenous soft tissue mass measuring 12 x 13 cm involving the upper and mid zones of the left thorax with destruction of the left second, third and forth ribs. There were no pulmonary deposits or pleural effusion **(Figure 1)**. The patient was started on anti encephalopathy measures and calcium resonium to lower hyperkalemia. Fine needle aspiration (FNA) of the chest wall mass demonstrated clusters of malignant hepatocytes with central, large, vesicular, hyperchromatic nuclei with frequent mitotic figures many of them were atypical and ample eosinophilic cytoplasm with increased nuclear cytoplasmic (N/C) ratio. The cells were arranged around sinusoidal blood vessels **(Figure 2)**. On immunohistochemical staining, the tumor cells were positive for AFP **(Figure 3)**. The above cytological and immunohistochemical features were compatible with metastatic hepatocellular carcinoma. Next day the patient deteriorated and died.

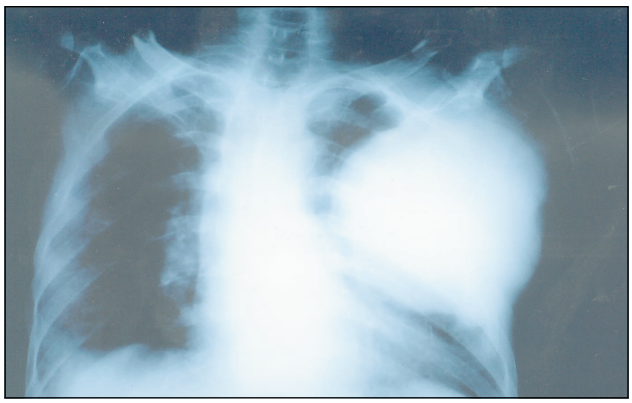

Figure 1 - Chest x-ray showing a huge soft tissue metastatic lesion in the left upper and mid zones of left thorax with destruction of the second, third and forth ribs.

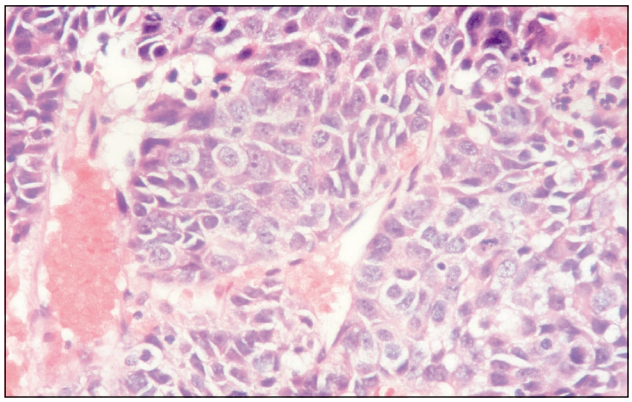

Figure 2 - Fine needle aspiration. Malignant hepatocytes showing peri-sinusoidal arrangment and increased number of mitoses (Hematoxylin & Eosin x 400).

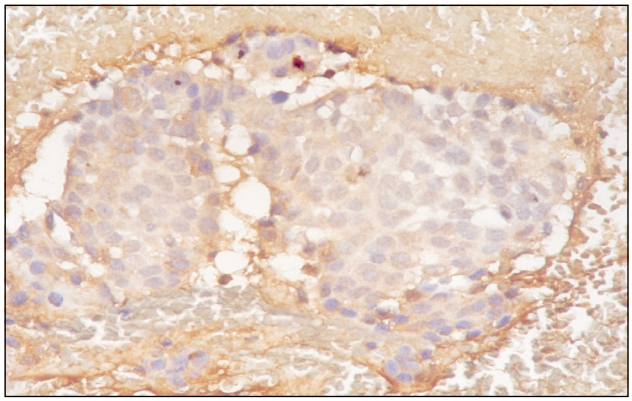

Figure 3 - Clusters of malignant hepatocytes showing cytoplasmic positive staining with alpha-fetoprotein (Hematoxylin & Eosin x 400).

Discussion. The most common sites of extrahepatic metastatic HCC are the lungs, abdominal lymph nodes and bone.[1] Cutaneous metastases from HCC are very rare.[2] These cutaneous metastases showed protean morphologic features with the face and scalp being the most common sites of involvement.[3] The metastatic lesions may be the presenting sign of the HCC,[3] and the hepatic lesions may not be detected until many months after the diagnosis of the metastatic disease.[4] Cutaneous metastases from HCC are being reported more frequently. This is due, in part, to more prolonged survival of liver cancer patients, which allows development of skin metastases, and also due to increased awareness by the clinician.[3] These cutaneous lesions are solitary or multiple, non ulcerative, painless, firm, reddish-blue nodules.[5] Sometimes, these cutaneous lesions are due to direct skin invasion from protruding liver tumor.3 The tumor markers AFP and the protein induced by vitamin K absence or antagonist–II (PIVKA-II) are useful for diagnosing the subcutaneous nodule as a metastatic HCC.[6] The immunohistochemistry of the biopsy specimen using AFP and the radiological evaluation of the liver using ultrasonography, computerized tomography, and magnetic resonance angiography are helpful to establish the primary tumors. There is no effective treatment for HCC with extrahepatic metastases.[7] External beam radiation therapy can be an effective palliative procedure for symptomatic patients.[8] The overall prognosis is poor as skin metastases are late manifestation of the HCC.[5,9] The average survival

after development of skin metastases is from 3 weeks to 6 months.[5]

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