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# A unique case of skip metastasis of hepatocellular carcinoma

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**ABSTRACT**
Metastasis to lymph nodes in a patient with hepatocellular carcinoma is generally observed to occur in regional nodes.We are reporting a rare case of hepatocellular carcinoma without any predisposing factors, initially presenting as leftmid cervical lymphadenopathy and subsequently diagnosed on fine needle aspiration. The surgeon and pathologistshould be aware of this entity, so that the correct diagnosis and subsequent management of the patient is rendered ontime.

KEY WORDS- Hepatocellular carcinoma, cervical lymph node metastasis, fine needle aspiration

## INTRODUCTION

Cervical lymph nodes are frequently involved in number of disease conditions. The common causes of cervical lymphadenopathy are tuberculosis, metastasis and rarely lymphoma. An enlarged, painless hard cervical neck node in an adult should be considered metastasis unless proved otherwise.[1]The most common type of metastasis to cervical region are squamous cell carcinoma from upper aerodigestive tract followed by adenocarcinoma less commonly. The adenocarcinomas to metastasize to cervical lymph nodes are breast, prostate, gastrointestinal tract tumors and rarely hepatocellular carcinoma(HCC).[2]

There are very few case reports in literature of hepatocellular carcinoma with cervical metastasis as the initial presentation.[3]We present one such case of HCC presenting as left cervical lymph node enlargement which was diagnosed on fine needle aspiration(FNA), thus highlighting the cytomorphological diagnosis of HCC.

## CASE REPORT

A 74 years old man presented to our hospital with generalized weakness and easy fatigability for two weeks, abdominal pain for three days and vomiting for two days. Abdominal pain was insidious in nature, gradually progressive and dull aching type. He had 3-4 episodes of vomiting just after food. There was no history of alcohol consumption, fever or blood transfusions.On examination,patient was thin built and afebrile. His vitals were normal.Per abdominal examination revealed mild hepatomegaly with firm and non-tender liver. A single lymph node was palpable in left mid cervical region measuring 2x1cm, non-tender and firm in consistency(Figure 1).

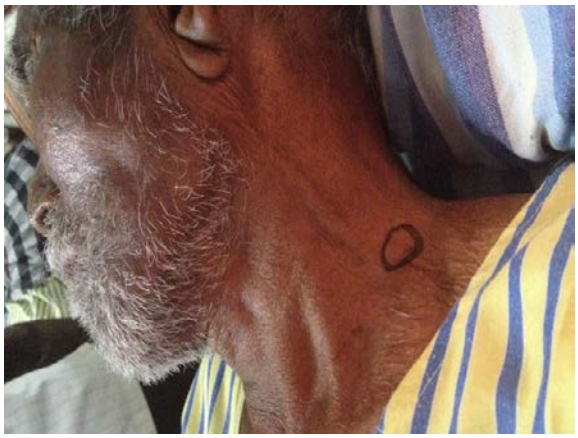

Figure 1 – Enlarged left mid cervical lymph node

Laboratory investigations revealed neutrophilicleukocytosis (total leucocyte count-19960 cells/cu mm, neutrophils-82%), raised serum amylase (265U/l),raised serum lipase levels(445U/l), raised alkaline phosphatase(134U/l) and reduced serum albumin(2.8g/dl). Serological tests for Human Immunodeficiency Virus, Hepatitis A, Hepatitis B and Hepatitis C were negative. He was treated with antibiotics, analgesics and IV fluids.

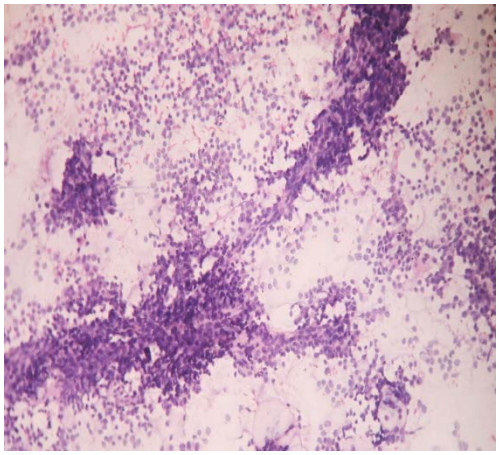

Figure 2 – FNA – Cellular smear showing discohesive sheets of cells.(H and E , X10)

He was referred to the pathology department for FNAof left cervical lymph node. The aspirate smears made were highly cellular showing discohesive sheets and clusters of moderately pleomorphic cells

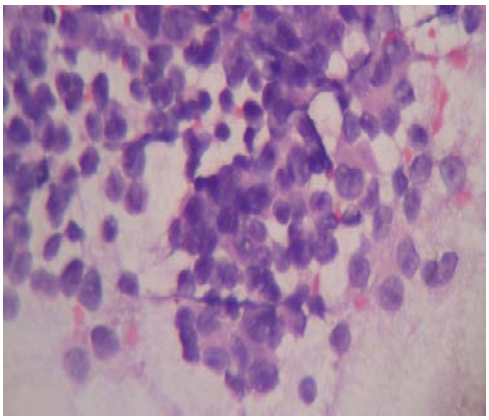

Figure 3- Cells showing nucleomegaly, irregular nuclear contours, hyperchromatic nuclei, open chromatin and prominent eosinophilic nucleoli. (H and E, X40)

These cells showed nucleomegaly, irregular nuclear contours, hyperchromatic nuclei, open chromatin, prominent eosinophilic nucleoli and occasional intranuclear cytoplasmic inclusions (Figure 2,3). A good number of endothelial cells were seen traversing through these cell clusters and wrapping them (Figure 4).

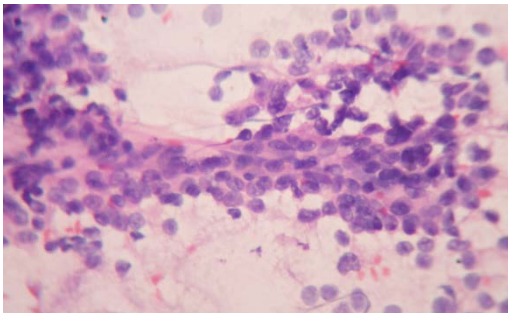

Figure 4- Endothelial cells were seen traversing through these cell clusters(H and E,X 40)

Few of these cells also showed brownish pigment of bile in their cytoplasm. With all these features,FNA was concluded as positive for malignancy, cytomorphology favoring metastatic hepatocellular carcinoma. Subsequently serum alpha feto protein levels werefound to be elevated (822 ng/ml).

Following this FNA report, patient was subjected to ultrasound abdomen which revealed a

large heterogeneous lesion in the liver measuring 77x96x108mm with increased vascularity

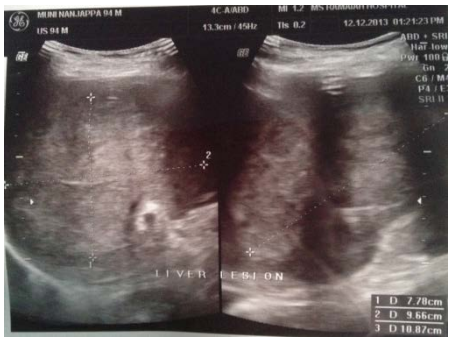


Figure 5- Ultrasound abdomen showing a large heterogeneous lesion in the liver with increased vascularity

Imaging did not show any regional lymphadenopathy. Ultrasound guided liver biopsy was done which confirmed space occupying lesion to be hepatocellular carcinoma (Figure 6).

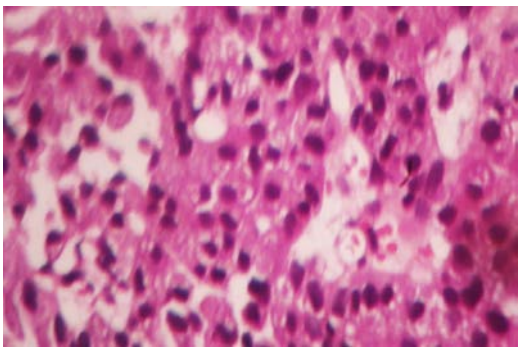

Figure 6 – Liver biopsy showing moderately differentiated Hepatocellular carcinoma.(H and E X40)

DISCUSSION

HCC is one of the most common causes of cancers worldwide.[3]The common predisposing factors are chronic alcoholism, hepatitis and cirrhosis. Distant metastasis of HCC occurs in three main ways; hematogenous, lymphatic and implantation metastasis.

Hematogenous dissemination is common, whereas lymphatic metastasis is uncommon in HCC. Lymphatic metastasis is documented in 25.5% of HCC at different stages.[4]Most commonly lymphatic spread occurs to regional lymph nodes likeperihepatic, peripancreatic and retroperitoneal group of nodes.[5]

HCC metastasis to cervical lymph nodes although uncommon does occur probably via perihepatic node and then through the thoracic duct. On the other hand a small amount of lymph flow communicates with diaphragmatic and intrathoracic lymphatic system through the bilateral triangular ligaments of liver.Our patient did not have any regional lymph nodes involvement, so the second pathway can explain the skip metastasis to cervical region[3].In addition cervical lymph node metastasis in HCC is considered as distant metastasis and associated with poorer prognosis.[4]

Early discovery of such distant metastasis is important for tumour staging, prognosis and therapy determination of patient with HCC. This advanced stage qualifies the patient for nonoperative treatment such as hepatic arterial chemoembolization, molecular targeted therapy, chemotherapy and radiotherapy instead of radical surgery.

**CONCLUSION**

Rarely cervical lymphadenopathy maybe the initial presentation of HCC. Thus the pathologist should be aware of such skip metastasis and alert the clinician and help them to prioritize the management of such advanced disease.FNA of cervical lymph node is not only useful for diagnosing the cause, but also helpful in deciding the appropriate management.

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