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## Hepatocellular carcinoma: A case report

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### Abstract

Hepatocellular carcinoma is one of the most common malignancies which is the third leading cause of cancer-related deaths worldwide. HCC is commonly caused chronic hepatitis. We report a 78 year old male patient from Tumkur city presented with chief complaints of weight loss since 6 months who was a was a known case of hypothyroidism, Type 2 Diabetes Mellitus and Hypertension. USG abdomen and pelvis showed cirrhosis of liver and well defined soft tissue lesion measuring 60\*55 mm with internal vascularity noted in segment 5 of liver and CECT abdomen showed changes of chronic liver disease and well defined hypodense lesion in segment 5 of liver. PET CT report showed mildly hypermetabolic lesions in the liver and scan features were concerning for multicentric HCC. Histopathological examination showed tumor comprised of malignant hepatocytes arranged in glandular, acinar and trabecular pattern.

**Keywords:** Hepatoceelular carcinoma, tumor, hepatocytes

### Introduction

Liver cancer is the third leading cause of cancer-related deaths worldwide and contributed to 8.2% deaths in 2018 [1]. 80% of the liver cancers are Hepatocellular carcinomas (HCC) [2]. 44% of all HCC cases worldwide are due to Chronic hepatitis B virus (HBV) infection and 21% due to hepatitis C virus (HCV) infection [3]. 5-year survival rate of HCC is only 18%. Early diagnosis has better prognosis as it will be suitable for curative treatments such as liver resection (LR), ablation, or liver transplantation (LT) [4].

There is lack of information about Hepatocellular carcinoma in India, as country's cancer registries are primarily urban. As per the unpublished data from various tertiary care institutions in India, the incidence of Hepatocellular carcinoma is rising [5]. The available information suggests that age-adjusted incidence rates of Hepatocellular carcinoma range from 1 to 7.5 per 100,000 population, 0.7 to 7.5 among men, and 0.2 to 2.2 in women [6]. Sikkim and Arunachal Pradesh have the highest incidence of liver cancer among all cancers in the country as per Population-Based Cancer Registry from 2012 to 2014 [7].

Hepatocellular carcinoma is generally seen in 6th and 7th decades of life in the western world, whereas in Asia and Africa, it usually occurs in the 4th decade of life and has more male predominance [8]. Most common organs involved in metastasis are lungs, regional lymph nodes, kidneys, bone marrow and adrenals [9].

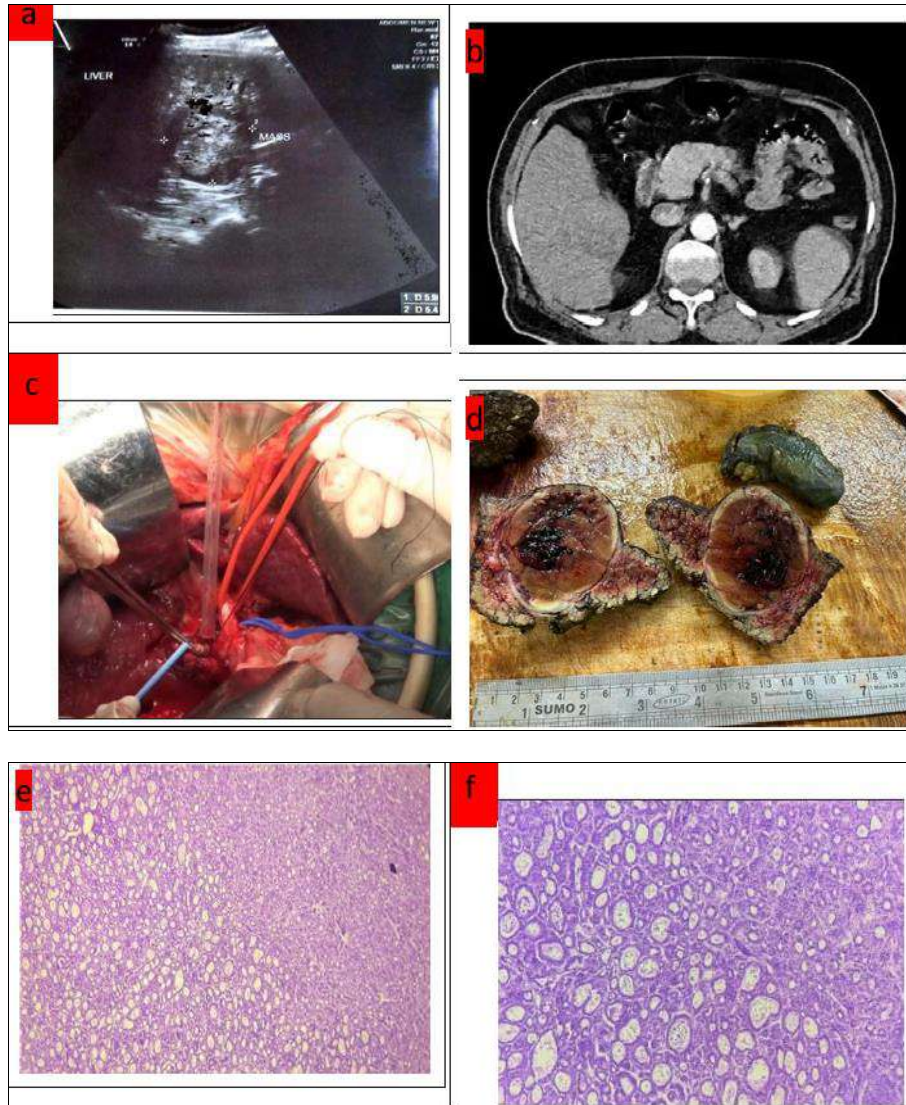
### Case Presentation

A 78 year old male patient from Tumkur city presented with chief complaints of weight loss since 6 months. Patient was apparently normal 6 months back after which he noticed weight loss of approximately 10 kg in six months. There was no history of fever, chest pain, dyspnoea, pain abdomen, nausea, vomiting, hematemesis, melena, alteration of bowel movements, decreased appetite or jaundice. He is non-alcoholic. He was a known case of hypothyroidism, Type 2 Diabetes Mellitus and Hypertension on medications. There was no history of blood transfusion, surgery in the past and no family history of malignancies. On examination patient was conscious, cooperative and well oriented to time, place and person. Vitals were stable except for high blood pressure recorded. Systemic examination was normal. Routine investigations like hemogram, urine routine, serum electrolytes, HIV, HBsAg were normal. Liver function test showed raised Bilirubin, Serum Glutamic oxaloacetic Transaminase and Serum Glutamic Pyruvic Transaminase levels.

Prothrombin time and International Normalized Ratio were also raised. Ultrasonography abdomen and pelvis showed cirrhosis of liver and well defined soft tissue lesion measuring 60\*55 mm with internal vascularity noted in segment 5 of liver. Contrast Enhanced Computed Tomogram (CECT) abdomen showed changes of chronic liver disease and well defined hypodense lesion measuring 60\*55 mm in segment 5 of liver. It shows heterogeneous enhancement on all phases of contrast study. PET CT report showed mildly hypermetabolic lesions in the liver and scan features were concerning for multicentric HCC. A diagnosis of hepatocellular carcinoma was made and resection was planned. Patient was optimized for major surgery with supportive measures. Non-anatomical segmental (segment V, VI, VII) resection of liver tumour with open cholecystectomy

was done under general anesthesia Pringle maneuver was done to delineate the left lobe of liver from right lobe. Resected tissue measured 10.5x8x7cm and the cut surface showed well circumscribed grey white nodule measuring 6x4.5cm which was sent for histopathological examination. Adjacent liver tissue measured 3.5x3 cm. Patient shifted to ICU and was monitored for vitals. Patient started taking orally on post-operative day 3 and discharged on day 5 of surgery.

Histopathological examination showed tumor comprised of malignant hepatocytes arranged in glandular, acinar and trabecular pattern. The cells showed eosinophilic cytoplasm with pleomorphism. Predominantly the cells were arranged in acinar pattern forming pseudoglandular pattern.



**Fig 1:** a) USG abdomen and pelvis showing cirrhosis of liver and well defined soft tissue lesion measuring 60\*55 mm in segment 5 of liver b) CECT abdomen showing changes of chronic liver disease and well defined hypodense lesion measuring 60\*55 mm in segment 5 of liver. c) Pringle maneuver to delineate the left lobe of liver from right lobe d) Resected tissue measuring 10.5x8x7cm, cut surface shows well circumscribed grey white nodule measuring 6x4.5cm. Adjacent liver tissue measures 3.5x3cm e) Histopathology showing tumor comprised of malignant hepatocytes arranged in glandular, acinar and trabecular pattern. The cells show eosinophilic cytoplasm with pleomorphism. f) Predominantly the cells are arranged in acinar pattern forming pseudoglandular pattern.

## Discussion

This case report highlights many typical manifestations of hepatocellular carcinoma like male predominance, old age of

onset and weight loss.

Hepatocellular Carcinoma is one of the most common cancers worldwide which is generally caused by chronic hepatitis B or C

or liver cirrhosis<sup>[10]</sup> but there was no predisposing factor in our case. Most common initial gastrointestinal symptom is melena and few may have hematemesis<sup>[11, 12]</sup>. In our patient presentation is very typical as he presented with significant weight loss. Most common age of presentation of HCC is between 50 to 70 years<sup>[13]</sup> which is typically seen in our case.

HCC on CT scan abdomen shows focal lesion which may invade either portal or hepatic veins. It may be multifocal or diffusely found in the liver. It usually has a heterogeneous appearance. On intravenous contrast administration it typically enhances more than the adjacent liver if the liver is imaged within 20 seconds after contrast is given (during the hepatic arterial phase because HCC is a hypervascular cancer and is fed by hepatic artery)<sup>[14]</sup>. In our case Contrast Enhanced Computed Tomogram (CECT) abdomen showed changes of chronic liver disease and well defined hypodense lesion measuring 60\*55 mm in segment 5 of liver. It showed heterogeneous enhancement on all phases of contrast study.

Pathologically, it can be either single or multiple nodules throughout the liver and histologically, it consists of cells resembling hepatocytes. HCC can metastasize via hepatic or portal veins to the lymph node, bones and lungs<sup>[15]</sup>.

Management of HCC depends on the stage of diagnosis because if it is diagnosed at an early stage they are optimal candidates for resection, liver transplantation or percutaneous ablation. Surgical resection is treatment of choice for patients with single tumors, absence of clinically relevant portal hypertension and normal bilirubin. Transplantation is recommended in patients with 3 nodules of <3 cm or with single tumors <5 cm with impaired LFT which precludes resection. Transarterial chemoembolization (TACE) is treatment of choice in patients with multinodular tumors that have not invaded hepatic vessels nor been disseminated outside the liver. Sorafenib has shown promising results in patients who cannot benefit from the above therapeutic options and have normal liver function tests<sup>[16, 17]</sup>.

### Conclusion

Although, HCC is common among cirrhotic liver here we are presenting a case report of HCC without any predisposing factors with a clinical feature of only weight loss further investigation showed us cirrhosis of liver which triggered a suspicion of it to be malignancy.

### Informed consent

Written informed consent was obtained from the patient for publication of this case report, including accompanying images.

### Acknowledgement

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### Conflict of Interest

Not available

### Financial Support

Not available

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