Hepatocellular Carcinoma with a Renal Cyst

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Hepatocellular carcinoma arising in non-cirrhotic livers are uncommonly found [1]. The disease has some peculiarities and can present insidiously, lacking classical symptoms and with derangement of liver functions. The clinical images of one such patient of hepatocellular carcinoma with lack of classical risk factors are reported due to its uncommon occurrence.

A 61-year-old man reported abdominal dragging sensation and decrease in appetite of two months duration. The patient attributed the symptoms to a right renal cyst that had been diagnosed three years ago. There was no other significant past medical or surgical history. There was no history of recreational drug use. There was an apparent history of unintentional weight loss as the patient felt that his clothes were getting loose but there were no documented records of objective weight measurements. Blood work did not reveal any significant abnormality except that the serum levels of alkaline phosphatase (ALP) were raised (252 IU/L: normal range 44 to 147IU/L) and hemoglobin levels were low (10.9gm/dL: normal range 13.5 to 17.5 gm/dL). Ultrasonography of abdomen (Figure 1) showed a well-defined hepatic mass with heterogeneous echo pattern measuring 12.8 x 11.9 cm. There was no evidence of dilated intrahepatic biliary radicles and the portal vein was of normal caliber. Gallbladder and spleen were normal. Both kidneys showed average size, position, and shape with normal parenchymal thickness, normal echogenicity, and preserved corticomedullary differentiation. The right kidney showed a simple cyst measuring 6.7 x 6.6 cm. There was no evidence of ascites or lymphadenopathy.

Multiple trans-axial CT sections (Figure 2) taken through the abdomen before and after contrast enhancement found an enlarged liver with well-defined soft tissue density mass occupying most of the right lobe and measuring 10.5 x 11 cm. The lesion showed a variable degree of enhancement after contrast with a central area of degeneration. There was no intrahepatic biliary dilatation. Spleen and pancreas were of homogenous density and normal dimensions. The right kidney showed a simple cortical cyst measuring 7 x 6.5 cm in dimensions. Para-aortic areas were within normal limits with no lymphadenopathy. There were neither collections/ascites nor pelvic masses. The patient was referred to a regional tertiary care center with a provisional diagnosis of hepatocellular carcinoma where the diagnosis was confirmed by image-guided biopsy of the lesion. While awaiting acceptance of referral from the tertiary care center, blood sample had been sent to a laboratory for assessment of levels of serum alpha-fetoprotein (AFP). The results were received after a delay when the patent had left our services and showed levels to be 19.6 ng/dL (normal <10 ng/dL).

Hepatocellular carcinoma is the most common type of primary liver cancer in adults and the third most frequent cause of cancer-related deaths worldwide [2]. Patients with cirrhosis are at the highest risk of developing this cancer and are candidates for surveillance.

The disease occurs in the setting of chronic liver inflammation and is linked to chronic viral hepatitis infection (hepatitis B or C) or exposure to hepatotoxins such as alcohol or aflatoxin. Certain diseases, such as hemochromatosis, alpha 1-antitrypsin deficiency, metabolic syndrome and non-alcoholic steato-hepatitis (NASH) are also increasingly recognized as risk factors for hepatocellular carcinoma [3].

Hepatocellular carcinoma continues to increase in incidence in several regions around the world and is still associated with poor overall survival [4]; however with a better understanding of the natural history of hepatocellular carcinoma in recent years and marked improvement in imaging modalities, loco-regional therapies, surgical techniques, and postoperative care, patients are now managed by multidisciplinary teams in dedicated centers leading to improved outcomes [5]. Resection of tumor and liver transplantation offers the best chance of survival. Loco-regional therapies, such as radiofrequency ablation and chemoembolization, provide effective local control in patients with acceptably preserved liver functions [4]. A multikinase inhibitor, Sorafenib, is a molecular targeted oral therapy and recent randomized trials have shown to provide a survival benefit in select hepatocellular carcinoma patients [2].

Figure 1: USG showing a heterogeneous hepatic mass (red arrows) and right renal cortical cyst (blue arrows)

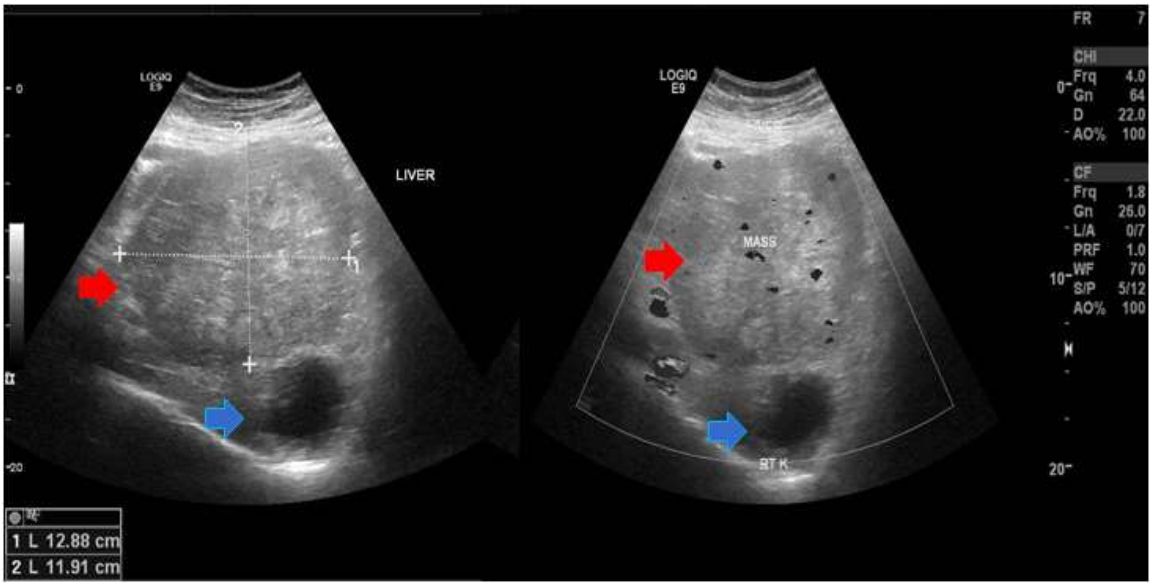
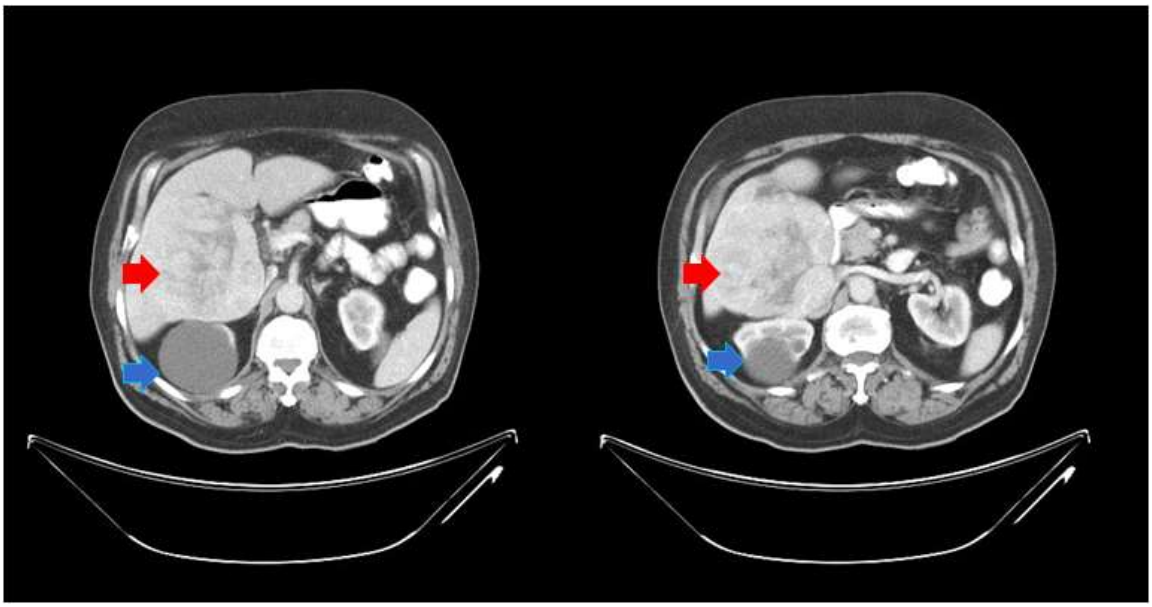


Figure 2: CT- Scan image showing a hepatocellular carcinoma (red arrows) & right renal cortical cyst (blue arrows).



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