UNUSUAL JAUNDICE

Kamel Jamil Chuhaiber

Civil Hospital Karachi

INTRODUCTION

Most common cause of jaundice is viral hepatitis. Other causes include biliary obstruction, drugs and rarely tumours. Hepatocellular carcinoma or metastatic tumour deposits may cause obstruction and cholestatic jaundice, but this is a late feature and by that time, a mass is generally palpable in liver. Sometimes malignant tumours are confused with some infective process mostly amoebic or pyogenic abscess [1,2]. This may cause much confusion and delay in treatment. Here an interesting case of a rare malignant tumour is presented which was initially misdiagnosed as a case of amoebic liver abscess.

CASE REPORT

A 30 year old male presented with about 3 weeks history of a mild right hypochondriac pain and frequent vomiting. He was treated by general practitioners and a hakim but without any relief. He also gave history of recent weight loss. There was no relevant past history. He had no addiction and no history of blood transfusion. He was a carpenter by profession, married with three children. He gave no previous history of hospital admission. General physical examination revealed jaundice with yellow sclerae. Temperature was 38.5°C. He was normotensive. Liver was enlarged about 4 fingers below right subcostal margin. No lymph nodes were enlarged. Thorough laboratory work up was done, which revealed:

Hematology

Hb 14.25g/dL
TLC 9900/cm
E.S.R. 62 mm in 1st hour
Platelets - 3,80,000/cm

Correspondence: Dr Kamel Jamil Chuhaiber, 15/16 Shehab Mehal Building, Near MCB-Bank, Pakistan Chowk, Karachi.

Biochemistry

AL T 100 U/L
Bilirubin total 9.2 mg/dL
Direct 6.8 mg/d/L, Indirect 2.4 mg/dL
AST 69 U/L
Gamma GT 52 U/L
Alk Phosphatse 1065 U/L (last report)
Urea 26 mg/dL
Creatinine 0.8 mg/dL

Serology

Anti HAV IgM - Negative
HBs Antigen - Negative
HCV serology - Negative
Amebiasis IHA < 1:16 (Ref. 1:32 titre)

Urine Analysis

Albumin (+)
Bile Salt (+ +) Urobilinogen Not increased

Prothrombin Time

Test: 26 secs Control: 14 Index 100%

APTT

Test: 46 sec. Control: 39 sec

Stools were initially normal in appearance then later on they were white.

Ultrasound of liver showed a hypoechoic area suggestive of amoebic liver abscess (fig. 1). Tablet metronidazole was started and serum was sent to laboratory for anti amoebic antibodies. On receiving Amebiasis IHA-Report (Serological Test for Amebiasis Antibodies) which was < 1.6 i.e. less than cut off point < 1.32 titre), Metronidazole therapy was urgently stopped. Patient was rescanned sonographically, but nothing had changed. MRI was done which revealed multiple low density masses in both lobes with dilated intrahepatic ducts due to heavy pressure on the common bite duct.

After checking his coagulation profile, and under necessary precautions, trucut biopsy using trucut needle no. 19 under CT scan was done. The specimen was sent for histopathological examination, which revealed a neoplastic lesion. The tumor cells were hyperchromatic, small, round to oval carrot shaped, with scanty cytoplasm. Nucleoli were prominent and at places mitotic activity was seen. The rosettes formation was also evident. PAS-D stain showed deposition of glycogen in tumor cells (fig. 2).

Immunohistochemistry on tumour cells showed MIC + +ve, CIC + +ve, Synapto physin –ve.

Interpretation of above findings was malignant neoplasm, morphological and immuno histochemical features suggestive of Primitive Neuroectodermal Tumor (PNET).

Afterwards Alfa – feto protein and Carcinoembryogenic Antigen were assayed and results were negative.

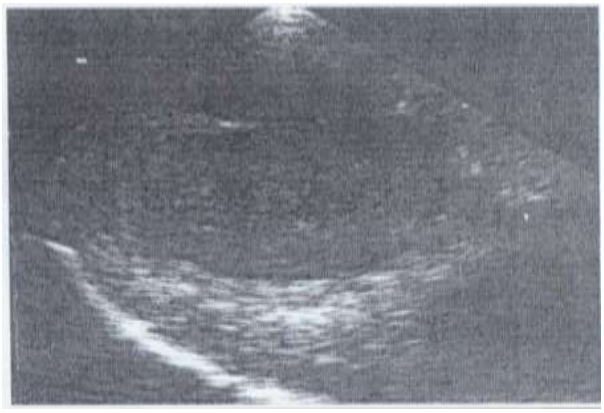

Fig. 1: Ultrasound liver revealed a hypoechoic area.

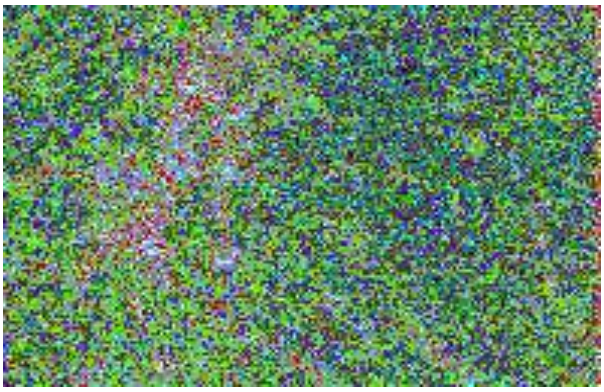

Fig. 2: Diagnostic Histopathological appearance of PNET. H&E x 200.

DISCUSSION

Primitive Neuroectodermal Tumor is diagnosed by virtue of immunohistochemical techniques used alongwith histopathological examination of tumors. PNET was firstly described by Hart and Earle in 1973 to describe a group of malignant neoplasms of presumed neural crest origin [3]. Although rare, but PNET is common in childhood and adolescence. Previously it was described as a tumor arising only in a neuro-axis. Cases of PNET have been increasingly reported in recent years outside CNS but categorically there are still very seldom reports of PNET originating in the Liver. Like all embryonal tumors, regardless of histogenesis, PNET share a common feature which reflects clinically aggressive behavior that corresponds to a grade IV tumor. PNET cytopathologically is characterized by small rounded cells, numerous mitoses, focal necrosis, most prominently the rosette formation with central fibrillary zone. Neuroblastic differentiation may be demonstrated with markers such as Neuron specific enolase, Neuron filament protein, MTC2, CK, and synaptophysin - etc or by ultra structural identification of neuro-secretory granules [4,5].

The origin of PNET in the liver is still under many hypotheses. It is postulated that PNET arise from scattered neuroendocrine cells in the epithelium of the intra hepatic biliary tract. Others propose that it originates from heterotopic of adrenal tissue or pancreatic ganglion tissue located in the liver. The third opinion is that they arise from neuroendocrine differentiation of a single malignant stem cell that is precursor of other hepatic tumors.

Previously the use of term PNET was used for diagnostic classification limited to meduloblastomas and to neoplasm that are located at other sites of neuro-axis but indistinguishable from medulloblastomas. Experiment immortalization of immature cells

from rodent brain has demonstrated the existence of bi-potential clonal stem cells that can differentiate into primitive neuro progenitor cells i.e. both neuronal or glial cell lines.

Regarding this patient, question arises that is it an intrinsic primary tumor of liver or it is a metastatic tumour? The diagnosis of the presentation of PNET clinically is challenging! In this case of hepatic PNET the ultrasound image was diagnostic and it resembled liver abscess i.e. mixed complex echogenic shadow surrounded by hypoechoic wall. Which was refuted by Amoebic serology. CT scan with contrast did not differentiate or yield information except confusion between metastasis to liver or hepatocellular carcinoma. Standard markers such as Carcinoembryonic antigen, CA19 and Alpha feto protein were negative.

The Somatostatin receptor scintigraphy also known as Octreoscan (OS) is said to be the imaging procedure of choice for the detection of PNETS, since it has the highest specificity. About 88% of neuro ectodermal/ neuroendocine tumors express Somatostatin receptor. OS images up to 16% of lesion that are not seen with other modalities. It has an accuracy of 83% and a positive predictive value of 100%. Because of the high specificity of OS, it should be included in the preoperative work up of suspected PNET. It could also be useful for excluding extra hepatic site of disease if it is not primary in the liver [6]. Since it was not available in Pakistan we couldn't get it done. So the last resort was to biopsy the lesion of the Liver (under C.T. guide) with Truvenol needle # 19. Biopsy is the gold standard to yield a proper (Histopathological) diagnosis and consequently to infer the prognosis and nature of a tumor [7].

It is concluded that when jaundice persists for more than two weeks, than further investigations should be done to reach the cause of jaundice so that proper treatment can be started.

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