CASE REPORT
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PARANEOPLASTIC PERIPHERAL NEUROPATHY AS CLINICAL PRESENTATION OF HEPATOCELLULAR CARCINOMA

Neurology

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ABSTRACT

Paraneoplastic syndromes are rare disorders that accompany the benign or malignant tumours but are not directly related to mass effects or invasion. Here we report a case of 62 year old male who presented with Peripheral neuropathy, further evaluation showed hepatocellular carcinoma (HCC). Though HCC can present as paraneoplastic syndromes, Peripheral neuropathy is a rare presentation of hepatocellular carcinoma. Recognition & diagnosis of paraneoplastic neuropathy is important as neuropathic symptoms usually precede the identification of primary tumor. Treatment at an earlier stage has better prognosis.

KEYWORDS

Paraneoplastic, Peripheral Neuropathy, Hepatocellular

INTRODUCTION

Overall, liver cancer accounts for 7% of all cancers and HCC represents 90% of primary liver cancers[1].The highest incidence rates of HCC occur in Asia and sub Saharan Africa due to high prevalence of hepatitis B virus (HBV) infection[1]. Although common and strongest risk factor for HCC is cirrhosis due to any etiology, it can also occur due to chronic viral hepatitis, Alcoholic liver disease, Non Alcoholic steato hepatitis, toxins. HCC usually presents with Anorexia, malaise, abdominal discomfort, unintentional weight loss.however it can also present as paraneoplastic syndromes aa their initial presentation in 22% cases[2]. It can present with various paraneoplastic syndromes like Hypercalcemia, hypoglycemia, erythrocytosis, Thrombocytosis, and hypercholestrolemia and rarely with paraneoplastic neurological syndromes like limbic encephalitis, multiple cranial nerve palsies and peripheral neuropathy

Case Report

This case report describes a 62 year old male presented to Out patient department with history of Bilateral Wrist, Elbow, Knee joint pain since 2 years which is associated with early morning stiffness.

He also complained of paresthesias of Bilateral lower limbs initially involving feet progressed to level of ankle within one year, swaying while walking in dark. He is known hypertensive, history of left hemiparesis with ischemic infarct in Right Thalamocapsular region 2 years back. He is a smoker for 40 years with smoking index 40 pack years until 3 years ago.

On examination his vitals were stable and was having clubbing grade 2, neurological examination showed absent ankle jerk decreased vibration sense at medial malleolus and great toe; decreased propriception at great toe and ankle ; Romberg test positive. Rest of the examination is normal.

His laboratory datarevealed elevated ESR of 75 mm/hr and Anti-CCP of 255.32units/ml(Normal < 20 u/ml). Rest of his investigations were Normal. Based on clinical and laboratory picture patient was initially diagnosed as Rheumatoid arthritis with peripheral sensory neuropathy and was discharged with low dose steroids. He had symptomatic relief and was on follow up at our hospital.

3 months later patient presented with similar complaints along with abdominal distension, abdominal pain, decreased appetite since 2 months.

On further evaluating him, Ultrasound showed Hepatomegaly with relatively well defined heterogenous lesions in both lobes of liver. Triphasic contrast enhnaced CT in fig A-D confirmed the diagnosis multi centric hepatocellular carcinoma with portal vein thrombosis.

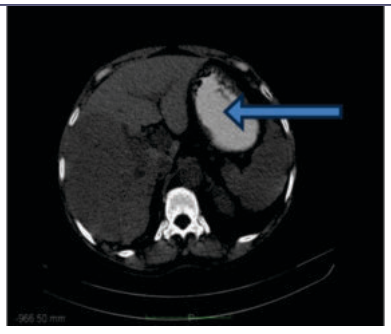

Fig A showing Well defined round to oval shaped isodense mass lesion seen in right lobe of liver & Isodense thrombus is seen involving the right branch and cofluence of portal vein

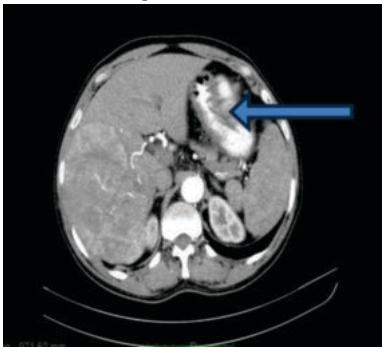

Fig B The mass lesion is showing heterogeneous enhancement with few nonenhancing areas on arterial phase

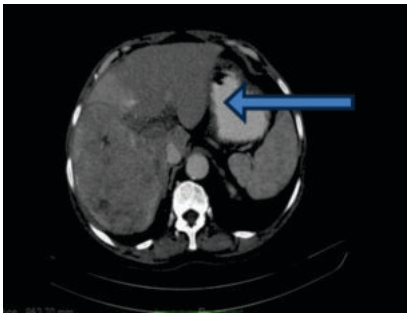

Fig C The mass lesion is showing relative washout of the arterial enhanced areas and progressive enhancement of arterial non enhanced areas on portal venous phase

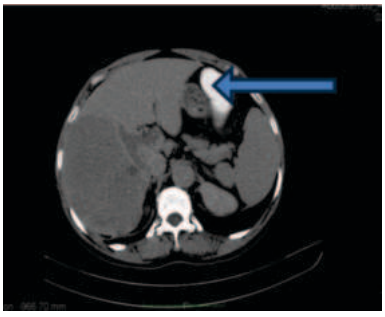

Fig D The mass lesion is showing complete washout and capsular enhancement in delayed phase; Isodense thrombus is following similar pattern of enhancements as the mass lesion - suggestive of tumor thrombus

DISCUSSION

Paraneoplastic neurological disorders are heterogeneous group of disorders that are immune mediated. Expression of neuronal proteins by tumor provoked an immune response that is misdirected against nervous system. This hypothesis is supported by detection in serum and cerebrospinal fluid of anti neuronal antibodies that react with antigens expressed by tumor and nervous system[3]. It is caused by mechanisms other than metastasis or by any of the complications of cancer such as coagulopathy, stroke, metabolic & nutritional conditions, infection and side effects of cancer therapy. Though HCC can present with various paraneoplastic syndromes like hypoglycemia (5.8%), Hypercalcemia (6.3%), Erythrocytosis (3.9%), Thrombocytosis(3.9%), hypercholesterolemia (2.4%), peripheral neurological syndromes in HCC are less. Among paraneoplastic neurological syndromes Peripheral neuropathy is most common paraneoplastic neurological disorder of HCC seen in between 16.8-43.6% cases. Cause is multifactorial and includes metabolic and nutritional deficits a d toxicity from chemotherapy. Clinically, the neuropathy was sensory (70%), sensorimotor (25%) or motor (5%). At onset, symptoms were symmetrical (65%), asymmetrical (25%) or multifocal (10%). Pain was a predominant manifestation (80%)[4].The prognosis of the patients with PSN is very poor. Therefore if we encounter an unusual presentation of peripheral neuropathy, it is crucial to evaluate potential paraneoplastic causes.

CONCLUSION:

HCC is one of the most common causes of cancer related deaths worldwide. Presence of Paraneoplastic syndromes is a poor prognostic sign. As such there is no specific treatment for Paraneoplastic peripheral neuropathy, but early identification & treatment of underlying cancer can improve the survival as surgical resection can be done at early stages. Therefore clinicians must be able to recognise the clinical manifestations of Neurological paraneoplastic syndromes. Limited studies are available for HCC presenting as peripheral neuropathy.Therefore Our case report can be of importance due to rarity of such presentation and need to create awareness to prevent deaths in patients with HCC.

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