MULTIFOCAL INFLAMMATORY PSEUDOTUMOUR OF LIVER (IPT) MIMICING METASTASIS -IMPORTANCE OF BIOPSY FOR SPACE OCCUPYING LESIONS IN LIVER

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Abstract :
Multifocal inflammatory pseudotumour of liver(IPT) is an uncommon tumor of liver. Exact etio-pathogenesis of this entity is yet to be elucidated. It can mimic clinically and radiologically with metastasis, hepatocellular carcinoma or hepatobiliary tuberculosis. It can even present as pyrexia of unknown origin. A 48 year old gentleman presented with fever and weight loss. He had multiple space occupying lesions in the liver. Ultrasound guided liver biopsy was suggestive of inflammatory pseudotumour of liver. He was treated conservatively. In present case diagnosis of liver IPT was carried out by fine needle liver biopsy. Indeed we believe that if clinical manifestations, imaging studies, level of tumour markers and results of histopathology specimens as obtained by fine needle biopsy are taken into account, accurate diagnosis of liver IPT can be made and surgery can be avoided.
Keyword : multifocal pseudotumour of liver, fine needle biopsy, fever of unknown origin, India

INTRODUCTION:
Inflammatory pseudotumour of liver (IPT) is an uncommon benign neoplasm of liver which was first described by Pack and Baker in 1953(1). Inflammatory pseudotumours have been reported in other organs of body like lungs, central nervous system, ovary, major salivary glands, omentum, larynx, bladder, spleen, pancreas, lymph node, and orbit with lung being the most common site of occurrence (2). Other synonyms for this condition are inflammatory myofibroblastic tumour, plasma cell granuloma, inflammatory histiocytoma, and xanthomatus pseudotumour . Microscopically, it consists predominantly of spindles cells, myofibroblasts which are positive for actin and vimentin on a background of inflammatory cells (plasma cells, lymphocytes and sporadically ,histiocytes). It usually presents as a solitary liver lesion in the right lobe of liver and mimics clinically and radiologically with malignancy or abscess. Most reported cases in literature are diagnosed after surgical resection. Only few cases are diagnosed with fine needle biopsy (4, 5, 6,) . As liver IPT
has favourable response to conservative treatment and may resolve spontaneously, precise recognition of this condition with fine needle biopsy may avoid unnecessary surgery.

**CASE REPORT:**
A 48 year old male from north eastern India, who is chronic smoker and alcohol consumer presented with fever and weight loss (6 kg) since last 3 months. He had received multiple courses of antibiotics by local physicians for fever. Ultrasound and CT abdomen done at local community hospital showed multiple space occupying lesions (SOLs) in both lobes of liver. Fine needle aspiration cytology from liver lesion was reported as metastatic adenocarcinoma. He was referred for further management. He was afebrile for 10 days prior to coming at our hospital. He also had weight gain of 4 kg in last 2 weeks. Clinical examination was unremarkable. His hemoglobin was 11.8, total leucocyte count was 8300 with 50 % neutrophils and 35 % lymphocytes. He had 3 % eosinophilia. Laboratory tests including liver function tests, alpha fetoprotein (AFP), carcinogenic embryonic antigen (CEA) were normal. Carbohydrate antigen (CA19-9) was slightly elevated (50 {normal range 0-33}).Serology for HIV, HBsAg and HCV were negative. As part of metastatic work up he was subjected to chest xray, gastroscopy and colonoscopy. Ultrasound and CECT abdomen and thorax done at our centre showed hepatomegaly with multiple hypodense lesions of varying sizes in both lobes of liver; largest one measuring 5.7x3.4cm in left lobe. Percutaneous ultrasound guided liver biopsy was performed to allow a histological diagnosis of the liver mass, and it confirmed IPT of liver. Cultures of biopsy tissue were not done. As he was afebrile and gaining weight, he was managed conservatively and kept on follow up.

**DISCUSSION:**
Liver IPT is benign solitary tumour usually involving right hepatic lobe of liver. Only two case reports of multifocal IPT have been reported (3, 4). We report the first case of multifocal hepatic IPT from a tertiary care centre in South India. Isolated case report of IPT presenting as infiltrative liver tumour has recently been reported (6). The exact etiology of inflammatory tumour of liver remains uncertain (9). Various proposed factors implicated in etiopathogenesis that causes exaggerated inflammatory response

1. Infections: The microorganisms which are implicated in various reports includes Bac - teoides, Actinomyces, Klebsiella, Escherichia Coli, Gram positive cocci and Beta-hemolytic streptococcus(10). This could explain the decrease in symptoms and radiological findings and sometimes resolution also, after antibiotic therapy. Our case also had resolution of fever and weight gain with antibiotic therapy. Infectious agents are not isolated in all cases of IPT.
2 Autoimmune: It has been proposed as a etiological factor as IPT is known to occur in association with various autoimmune disorders like IgG4 related sclerosing cholangitis (10), autoimmune pancreatitis(11,12), Crohn’s disease(13), Sjogren syndrome(14). Moreover, steroid therapy in IPT leads to disease regression. Several mechanistic aetiologies have been proposed for IPT which includes increased biliary concentration of monomeric bile acids. Fickert et al proposed pathophysiology implicated in lithocholic toxicity (15). The most common symptoms of IPT are abdominal pain, fever, weight loss and jaundice (18,19). Sometimes they are asymptomatic. It can present as fever of unknown origin also (6). Our patient presented with fever and weight loss. In our patient, the serum level of CA19-9 was slightly elevated. Interestingly, there are some evidences to suggest that liver IPT itself can raise CA 19-9 levels (5,6,18,19). Histopathologic features of IPTs include the presence of myofibroblasts, spindle cells infiltrated by plasma cells and chronic inflammatory cells (16). Ultrasound, CT scan, and magnetic resonance imaging of liver IPT have revealed various patterns, probably due to various proportions or the distribution of histologic components in different cases. [7, 19] Liver IPT may also both clinically and radiologically mimic a hepatocellular carcinoma, cholangiocarcinoma, hepatic metastasis, or a liver abscess. [4] Accordingly, diagnosis in most of the reported cases were established after surgical resection. In present case diagnosis of liver IPT was carried out by fine needle liver biopsy. Indeed we believe that if clinical manifestations, imaging studies, level of tumour markers and results of histopathology specimens as obtained by fine needle biopsy are taken into account, accurate diagnosis of liver IPT can be made and surgery can be avoided. The first line of management, once diagnosis is established should be conservative therapy as it had shown favourable response to it and even spontaneous disappearance have been noted(3). So patients should be kept on follow up or treated conservatively. Antibiotics, Non Steroidal anti-inflammatory drugs and steroid therapy are agents useful in conservative management. Surgery should be considered only in cases not responding to conservative treatment, in patients who have IPT located at hepatic hilum as it causes biliary obstruction and portal hypertension and in asymptomatic patients whose IPT is increasing in size on serial examinations and imaging studies. Recurrences and malignant transformation have been reported with either conservative or surgical therapy. In conclusion, liver IPT should be considered in the differential diagnosis of fever and mass lesions of the liver. After proper evaluation for exclusion of malignancy, follow up or conservative therapy should be the first line of management, and surgical resection should be reserved for selected indications.

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