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OBSTRUCTIVE JAUNDICE: A RARE HEPATOBILIARY MANIFESTATION OF TUBERCULOSIS.

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ABSTRACT: Obstructive jaundice secondary to abdominal tuberculosis (TB) is an extremely rare presentation. However it should be considered in differential diagnosis of surgical jaundice for patients living in endemic zones who are young or immunocompromised. Every effort should be made for early preoperative tissue diagnosis which is often difficult. Over reliance on indirect radiology or serological evidences put clinician in a dilemma. High index of suspicion and awareness of this disease entity on part of treating clinician is central to optimum management. Early diagnosis offers easy reliable medical cure in contrast to late diagnosis when surgery in conjunction with medical treatment provides cure. Desirable tissue diagnosis is often hard to achieve in this location. Large majority of reported cases have been diagnosed either during surgery or post operatively on histopathology report. EUS and guided FNA plays a crucial role in such cases –a fact highlighted in this report.

KEYWORDS: tuberculosis; obstructive jaundice; cholangiocarcinoma; extrapulmonary; endoscopic; ultrasound; tissue diagnosis.

INTRODUCTION: Tuberculosis, although declared a global public health emergency in 1993 by World Health Organization^[1], still remains a major global health problem and ranks as the second leading cause of death from infectious diseases worldwide, after the human immunodeficiency virus (HIV).

Abdominal tuberculosis (TB) commonly affects the intestinal tract, lymph nodes, peritoneum and solid organs in varying combinations.^[2] Obstructive jaundice secondary to abdominal TB is extremely rare and can be caused by TB enlargement of the head of the pancreas, TB lymphadenitis, TB stricture of the biliary tree, or a TB mass of the retroperitoneum.³

We hereby report a case of obstructive jaundice in a young adult male, occurring as a result of tubercular lymphadenitis of peripancreatic lymph node with pressure effect on the biliary tract. The reported case emphasizes the role of Endoscopic Ultra-sonogram (EUS) guided fine needle aspiration cytology (FNAC) in early and definite preoperative aetiological diagnosis that spares the patient from surgery and psychological trauma from misdiagnosis. The primary focus of managing such cases should be on early confirmatory tissue diagnosis and initiation of antitubercular therapy to avoid major surgery as often required to deal with late sequel of established disease.

CASE REPORT: A 39 years old male presented with weakness, weight loss of 8 kg, loss of appetite and jaundice for 3 months. There was no history of fever, abdominal pain or any other prominent gastrointestinal symptom. No organomegaly or palpable mass was detected on abdominal examination. Systemic examination was normal.

Haematological examination was within normal limits. Biochemical investigation revealed raised total bilirubin (4mg %) with conjugated hyperbilirubinaemia (2.9mg %), raised hepatic

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enzymes including Alkaline phosphatase (1812U/L). All the viral markers were negative, so were tumour markers CA 19.9 and CA 125. Ultrasonography of hepato-biliary system showed dilated intrahepatic biliary radicle (IHBR) & proximal common bile duct (CBD). X-ray chest was normal. Montoux test was initially not done in the diagnostic work up but proved to be strongly positive when tested subsequent to tissue diagnosis.

Patient subsequently underwent Magnetic Resonance Cholangio Pancreatography (MRCP), which revealed long segment lower CBD narrowing with dilated proximal system. CBD was free of stone with no luminal lesion of gall bladder. No focal lesion in the liver was detected. Sphincterotomy was done during Endoscopic Retrograde Cholangio Pancreatography (ERCP) with insertion of a plastic biliary stent. ERCP findings of smooth narrowing of lower CBD [Figure 1]a corroborated with the findings of MRCP. [Figure 1]b

CT abdomen showed a relatively poorly enhancing 2.5 cm lesion abutting the head of the pancreas [Figure 2]a causing extrahepatic obstruction of CBD. Exophytic SOL in pancreatic head, lymph node lesion and cholangiocarcinoma in decreasing order of probability were suggested as differential diagnosis. We planned EUS-FNAC as the next investigation before proceeding to laparotomy with a presumptive diagnosis of cholangiocarcinoma.

However during EUS, a hypo-echoic lymph node was seen at the lower end of bile duct near pancreatic head, [Figure 2]b measuring 18x15 mm, in close association with CBD and portal vein. FNAC of the involved lymph node was performed and purulent material aspirated was then sent for immediate cytopathological examination.

MICROSCOPIC EXAMINATION: Well-formed epithelioid cell granulomas were found amidst lymphoid cells in various stages of maturation. Caseous necrosis was seen in the background. [Figure 3]a Ziehl Neelsen stained smear revealed plenty of acid fast bacilli [Figure 3]b facilitating a confirmative diagnosis of tuberculosis.

Patient was put on 4-drug anti-tuberculous therapy (ATT) after a confirmative diagnosis and he has gained 4 kg weight after one month of treatment. The biliary stent was removed after 2 months of ATT, which was continued for 8 months. In the yearlong follow up he has regained his full health and enjoying good quality of life.

DISCUSSION: Obstructive jaundice as the sole clinical presentation of extra-pulmonary tuberculosis is a rare entity. Tubercular involvement causing jaundice is multifactorial. Involvement of the head of the pancreas, hepatobiliary system with stricture in the biliary tree or a tubercular mass of the retro peritoneum can lead to obstructive jaundice.^[3] Jaundice can also occur secondary to compression of bile ducts by enlarged lymph nodes in the porta hepatis.^[4]

Patients with this condition usually present with a protracted illness. Combination of jaundice with obstructive pattern and weight loss pushes the clinician to a possible diagnosis of hepatobiliary malignancy.^[5]

Imaging techniques like CT scan and ERCP often helps in differentiating benign from malignant hepatobiliary pathologies. TB lymphadenitis may be suspected when a contrast-enhanced CT scan demonstrates low density mass surrounded by an enhancing solid rim, or when ERCP demonstrates a normal pancreatogram with a smooth narrowing of the CBD.^{[6],[7]} Even combined

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interpretation of the radiological and endoscopic investigations did not reliably excluded malignancy in the reported case.

Alvarez and Sollano^[8] proposed that characteristic cholangiography patterns on ERCP are seen in hepatobiliary tuberculosis, including (1) a tight hilar stricture with dilated intrahepatic ducts, (2) a long smooth stricture involving the distal bile duct, (3) pruning of the distal intrahepatic ducts, and (4) sclerosing cholangitis-like changes. Cytology of CBD aspirate, obtained by ERCP, may be confirmatory in the presence of the acid-fast bacillus but is only positive if a fistula exists between the TB lymph node and the CBD, allowing bacilli to pass into the CBD.^[9] Since no fistula existed between the lymph node mass and the CBD in the reported case, alternative method of obtaining the material through EUS guided FNAC was performed which helped in clinching the confirmative diagnosis of Tubercular lymphadenitis.

Image guided FNAC is considered a safe and reliable method in the diagnosis of abdominal tuberculosis and helps in differentiating it from lymphomas and other malignancies.

Once the diagnosis is established, antituberculous therapy (ATT) is the treatment of choice and provides cure in nearly all patients. However, patients with evidence of persistent biliary obstruction after ATT would need either endoscopic or surgical intervention to relieve the obstruction as established fibrosis of tuberculosis does not always resolve on ATT. In the reported case, ERCP revealed smooth narrowing of a segment of distal CBD and temporary biliary stenting relieved the biliary obstruction, ATT was started only after a confirmative diagnosis achieved with EUS guided FNAC with complete recovery after 8 months ATT. Patient is now without clinical jaundice and having normal Liver Function Test even though the biliary stent has been removed 2 months after placement.

CONCLUSION: Obstructive jaundice as a presentation of extra-pulmonary tuberculosis is a rare and often missed and though many diagnostic modalities are available image guided FNAC is of utmost importance but sadly underutilized. Tuberculous aetiology should be considered as a differential diagnosis in patients with obstructive jaundice who live in endemic zones of tuberculosis, especially when they are relatively young or immune compromised and presents with atypical clinical presentations. Every attempt for preoperative confirmative tissue diagnosis should be made by availing the entire gamut of investigations including EUS and guided FNAC to avoid unnecessary major surgical interventions. With resurgence of tuberculosis following HIV infection worldwide, presentations like this has increased significantly, making preoperative tissue diagnosis in all cases of obstructive jaundice desirable.

Image guided FNAC is safe, cost effective and reliable technique which aids rapid diagnosis of abdominal tuberculosis and helps in differentiating it from lymphomas and other malignancies making it a superior investigation than RT-PCR. EUS is the most sensitive and specific investigation to identify peripancreatic masses and the American Joint Commission on cancer now recommends EUS-FNA as the preferred diagnostic modality for such lesions.

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