Case report

Ileocaecal TB with multiple hepatic granuloma mimicking malignancy with metastasis to liver

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ABSTRACT

Introduction: Abdominal tuberculosis is a rare manifestation of tuberculosis[1]. It can involve any part of the gastrointestinal tract but the most likely sites of infection are the peritoneum and the ileo-caecal region. We present unusual a case of Ileocaecal TB with multiple hepatic granuloma mimicking malignancy with metastasis to liver.

Case presentation: A 38 years old male, Sudanese, had two months history of painful tender mass in the right iliac fossa that was associated with low grade fever, constipation and loss of appetite. He had no symptoms or signs related to other systems and he denied any contact with chronic cough patient. ESR 100mm/hr, normal CXR, ultrasound revealed multiple hypoechoic liver focal lesions, multiple para-aortic Lymph node and a thick wall terminal ilium. CT abdomen showed bowel segment with wall thickening and irregular lumen in the right iliac fossa, enlarge para-aortic lymph nodes and multiple hepatic focal lesions which gave the impression of caecal carcinoma with liver metastasis. OGD was reported as normal. Colonoscopy revealed an abnormal mucosa at the caecum, suspicious of carcinoma caecum. Multiple biopsies were taken. Histopathology revealed epithelioid granulomas with Langhans giant cells as well as areas of mild cryptitis, could be either tuberculosis or Crohns disease, Ultrasound guided liver biopsy from the focal lesions revealed epithelioid cells and poorly formed granulomas with areas of caseation and fibrosis suggestive of tuberculosis. PCR for aspirate from liver focal lesion biopsy was positive for tuberculosis. The patient was treated with antituberculous chemotherapy. Complete cure was obtained during follow up.

Keywords: Abdominal tuberculosis, Ileocaecal tuberculosis hepatic granuloma.

Abdominal tuberculosis is rare[1]. It is difficult to diagnose due to lack of specific symptoms and pathognomonic findings and consequently the treatment may be delayed. Abdominal tuberculosis is defined as infection of the peritoneum, hollow or solid abdominal organs[2], however, it can involve any part of the gastrointestinal tract.The abdomen is the sixth most frequent site of extra-pulmonary tuberculosis.Themost likely sites of infection in the abdomenare the peritoneum and the ileo-caecal region[3].

Case report:

A 38-year old Sudanese male presented with two months history of low grade fever, right iliac fossa pain, constipation and weight loss.

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There were no symptoms related to other organs. His past history, family history and drug history were of no relevance. He is single not smoker or alcohol consumer.On clinical examination he was pale and emaciated with a BMI of 14.Temperature was 38°C. There was no palpable lymphadenopathy and his, Chest and CVS were clinically normal. Abdominal examination revealed a palpable tender right iliac fossa mass measuring 4x4cm with normal skin above it. There was no organomegally or ascites. Investigations showed: Hb% 10.5 g/dl, TWBC 9.8/mm^2, Platelet Count: 312.000, ESR: 100mm/h, CXR: Normal, Abdominal ultrasound revealed multiple hypoechoic liver focal lesions, multiple para-aortic Lymph nodes and a thick wall terminal ilium (Figure 1a and 1b). CT abdomen also showed bowel segment with walled thickening and irregular lumen at

the Right iliac fossa, enlarge para-aortic Lymph nodes and multiple hepatic focal lesions.(Figure 2& 3).
OGD: was reported as normal, Colonoscopy: revealed an abnormal mucosa at the caecumthat gave impression of carcinoma caecum, multiple biopsies were taken (Fig 4a and 4b).

Fig 1a: multiple liver focal lesions, and thick wall terminal ilium.

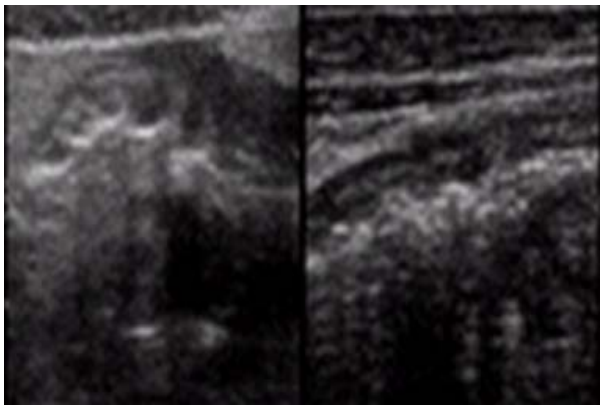


Fig 1b: Enlarged mesenteric lymph nodes

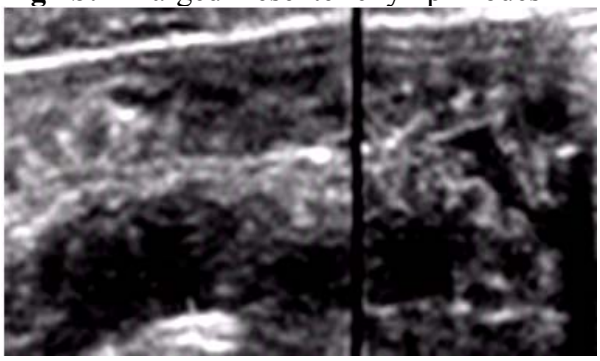
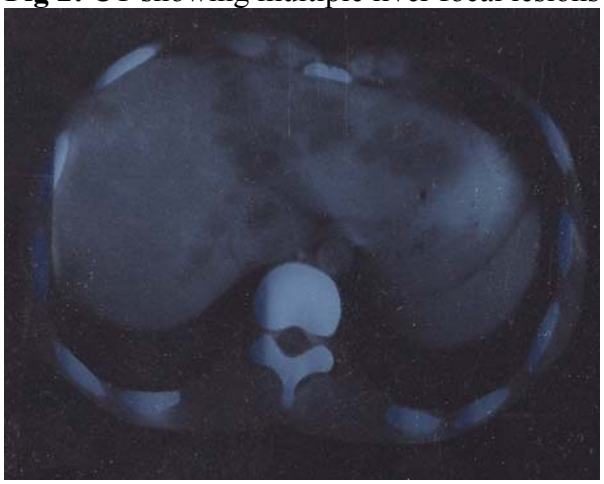


Fig 2: CT showing multiple liver focal lesions



Histopathology reported poorly formed epithelioid granulomas with Langhans giant cells as well as areas of cryptitis suggested a differential diagnosis of either tuberculosis or Crohns disease (Fig 5a).

Fig 3: CT showing thick-walled Terminal ileum.

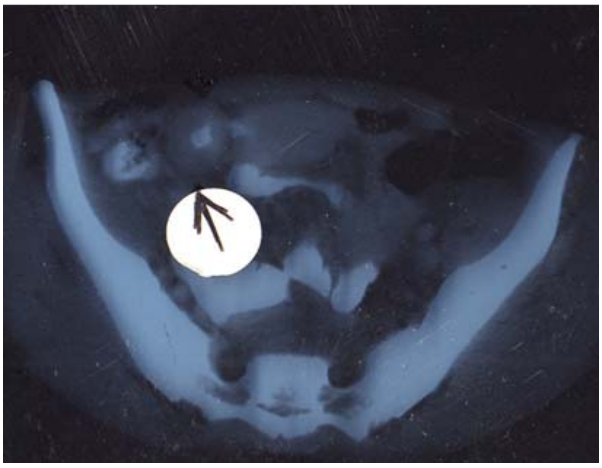


Fig 4 a: Colonoscopic nodules

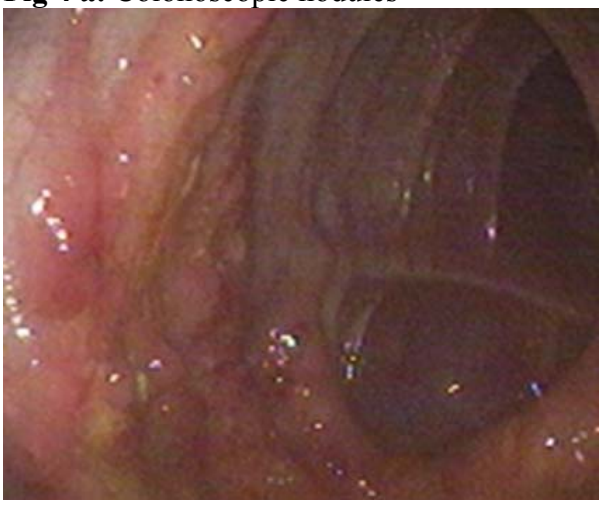
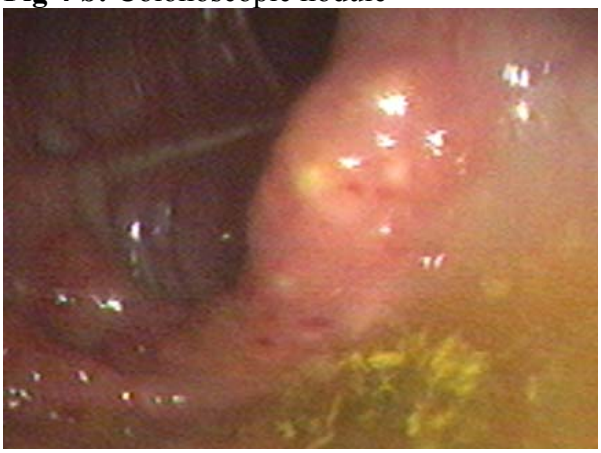


Fig 4 b: Colonoscopic nodule



U/S guided liver Biopsy from the focal lesions revealed epithelioid cells and poorly formed granulomas with areas of caseation and fibrosis consistent with tuberculosis (Fig

5b), and PCR for tuberculosis obtained from liver focal lesion biopsy was positive.

Fig 5 a: epithelioid granulomas.

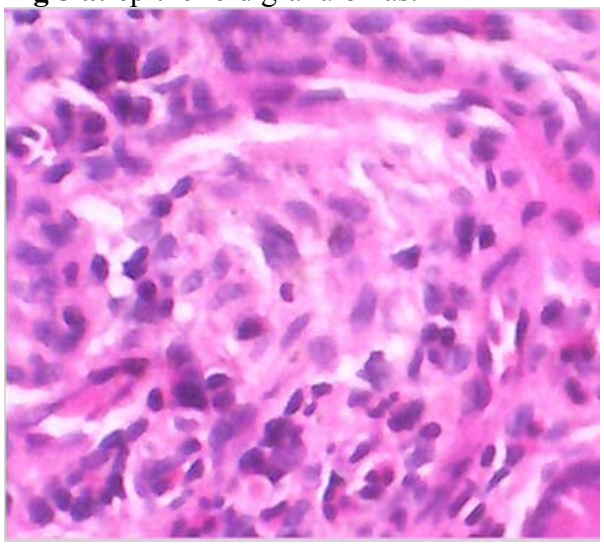
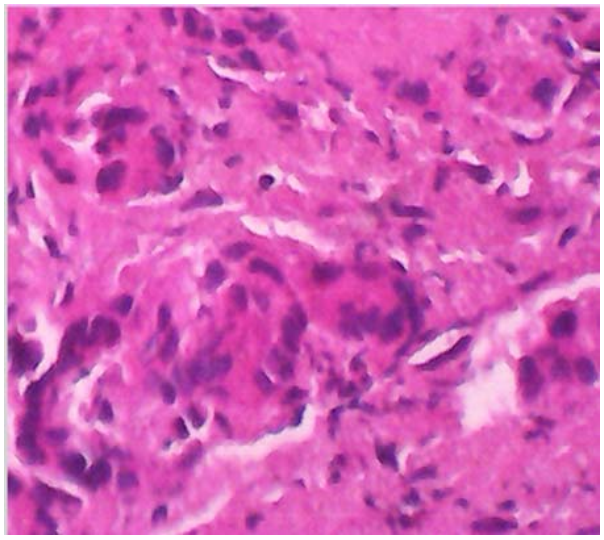


Fig 5 b: granulomas with caseation and fibrosis.



Discussion:

Hepatic tuberculosis is usually associated with an active pulmonary or miliary tuberculosis, but rarely localizes as liver tumour mass. Tubercle bacilli reach the liver by haematogenous dissemination.The portal of entry in miliary tuberculosis is the hepatic artery, whereas, in focal liver tuberculosis it is the portal vein. Tuberculous granulomata are most frequently found in the periportal areas Zone1 (Rappaport) but may occasionally occur in Zone 3[4]. Both caseating and noncaseating granulomas are seen[4]. In focal tuberculosis, various granulomas may coalesce to form a large tumor-like tuberculoma. AFB is accepted as evidence of tubercular aetiology in most parts of Asia and Africa unless proven otherwise[5,6]. Local hepatic tuberculosis, defined as tubercles 2 mm in diameter, usually occurs along with a tuberculous focus elsewhere[7]. Isolated hepatic tuberculoma (syn. nodular hepatic tuberculosis, macronodular hepatic tuberculosis)[8] is a rare form of local hepatic tuberculosis. Local hepatic tuberculosis has mostly been reported from South Africa and the Philippines[6,10]. Constitutional symptoms in the form of fever, anorexia and weight loss were present in 55%-90% of the patients. Abdominal pain is present in 65%-87% of patients [9, 10], but jaundice can be seen in 20%-35% of patients[6, 9, 10]. Hepatomegaly and splenomegaly are thecommonest findings, being present in 70%- 96% [6,9,10] and 25%-55%[6,10] of patients respectively. Liver is hard and nodular in about half thecases[6,11]. Findings from liver function tests are non-specific with the notable exception of an elevated alkaline phosphatase level in 50%-87%[9,10]. The final diagnosis of hepatic tuberculosis depends on histopathologic evidence of caseating granuloma or demonstration of acid fast bacilli (AFB) on smear or culture. Using needle biopsy specimen, epithelioid granuloma formation can be demonstrated in liver tuberculosis in 80% -100% of cases, caseation necrosis in 30% - 83% and AFBon smear examination in 0% - 59% of cases[5,10,12,13]. Demonstration of AFB is more common in tubercular abscess verses solid tuberculomas because AFB are abundant in liquefied caseous material however the absence of AFB does not exclude the diagnosis, particularly in endemic areas of tuberculosis[14]. Sometimes histopathology examination or culture of the scrapings from the abscess wall may be required to be obtained by mini-laparotomy to settle the diagnosis[15]. Recently, the Polymerase chain reaction (PCR), a useful diagnostic tool for hepatic tuberculosis, enables the rapid identification of M. tuberculosis. Diaz et al. found that at least 57% of hepatic granulomas caused by tuberculosis gave positive PCR test results[16]. In addition to, PCR analysis can

distinguish M. tuberculosis from other species of Mycobacterium[16].

Treatment and prognosis hepatic tuberculosis is treated like any other extrapulmonary tuberculosis lesion. In the past most authors have used four drugs (INH, Rifampicin, Streptomycinand Pyrazinamide) during the initial two months, followed by INH and Rifampicin for the next seven months[5, 17].The WHO continues to recommend the use of fixed-dose combinations (FDCs), as does Standard. FDCs are thought to prevent acquisition of drug resistance due to monotherapy, which may occur with separate ("loose") drugs. With FDCs, patients cannot be selective in the choice of drugs to ingest[20]. Cumulative mortality for hepatic tuberculosis ranges between 15% and 42%[6,12]. The factors associated with adverse prognosis are age less than20 years, miliary tuberculosis, concurrent steroid therapy, AIDS, cachexia, associated cirrhosis and liver failure. The importance of associated disease in the outcome of hepatic tuberculosis cannot beoverstressed;nearly 50% of the deaths in thePhilippines study were due to respiratory failureand another third from ruptured esophagealvarices due to associated cirrhosis[6]. Even inpatients with AIDS and tuberculosis, the cause ofdeath is invariably the former[18]. Mamo JP, Brij SO & Enoch DA reported that abdominal TB is a diagnostic challenge, especially in absence of lung involvement. It mimics other diseases and clinical presentation is usually non-specific, which may lead to diagnostic delay and development of complications[19].

Conclusion:

In our case tuberculosis presented as right iliac fossa mass with hepatic focal lesions mimicking metastatic cancer.

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