http://jmscr.igmpublication.org/home/
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v11i3.17

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Case Report

Case Report on Multicentric Tuberculosis - A Rare Presentation

Authors
Dr Mohammed Hidayath Hussain[1], Dr Sumayya Afreen[2*], Dr Hina Afreen[3]
[1]Professor and Head of Department - Pulmonology Dr. VRK Women's Medical College Teaching and Research Institute
[2]First Year Post Graduate, Dept of Pulmonnology Dr.VRK Women's Medical College Teaching and Research Institute
[3]Senior Resident Dept of Pulmonnology Dr.VRK Women's Medical College Teaching And Research Institute
*Corresponding Author
Dr Sumayya Afreen

Abstract
Tuberculosis is a multi systemic disease with myriad presentation and manifestations, though pulmonary tuberculosis is the most common presentation, extra pulmonary tuberculosis involving other organs of the body is often seen. Individuals with poor nourishment and low immune status are especially susceptible for disseminated and multicentric tuberculosis. we report a case of multicentric tuberculosis which is a rare presentation in a 56yrs old female presented with abdominal pain and abdominal distension.
Keywords: *Multi centric tuberculosis, Abdominal tuberculosis, hepatic and splenic tuberculosis.*

Introduction

Tuberculosis is still a very common disease in developing countries. Pulmonary tuberculosis is commonest form of tuberculosis but patients may present with lesions in location not involving the lungs. Immuno competent individuals are more susceptible for multi centric tuberculosis. Extra pulmonary tuberculosis may involve abdominal organs, skeletal system, lymph nodes.

Abdominal tuberculosis {TB} is an uncommon form of infection with mycobacterium tuberculosis .Abdominal tuberculosis is defined as infection of the gastrointestinal tract, peritoneum, abdominal solid organs, and or abdominal lymphatics with mycobacterium tuberculosis[11]. Abdominal TB constitute approximately 12% of extrapulmonary tuberculosis cases and 1%to3% of total TB cases. Abdominal TB is one of the most common form of extra pulmonary TB. Abdominal TB is relatively rare but it is recognized that abdominal TB is increasing in both developing and developed countries.

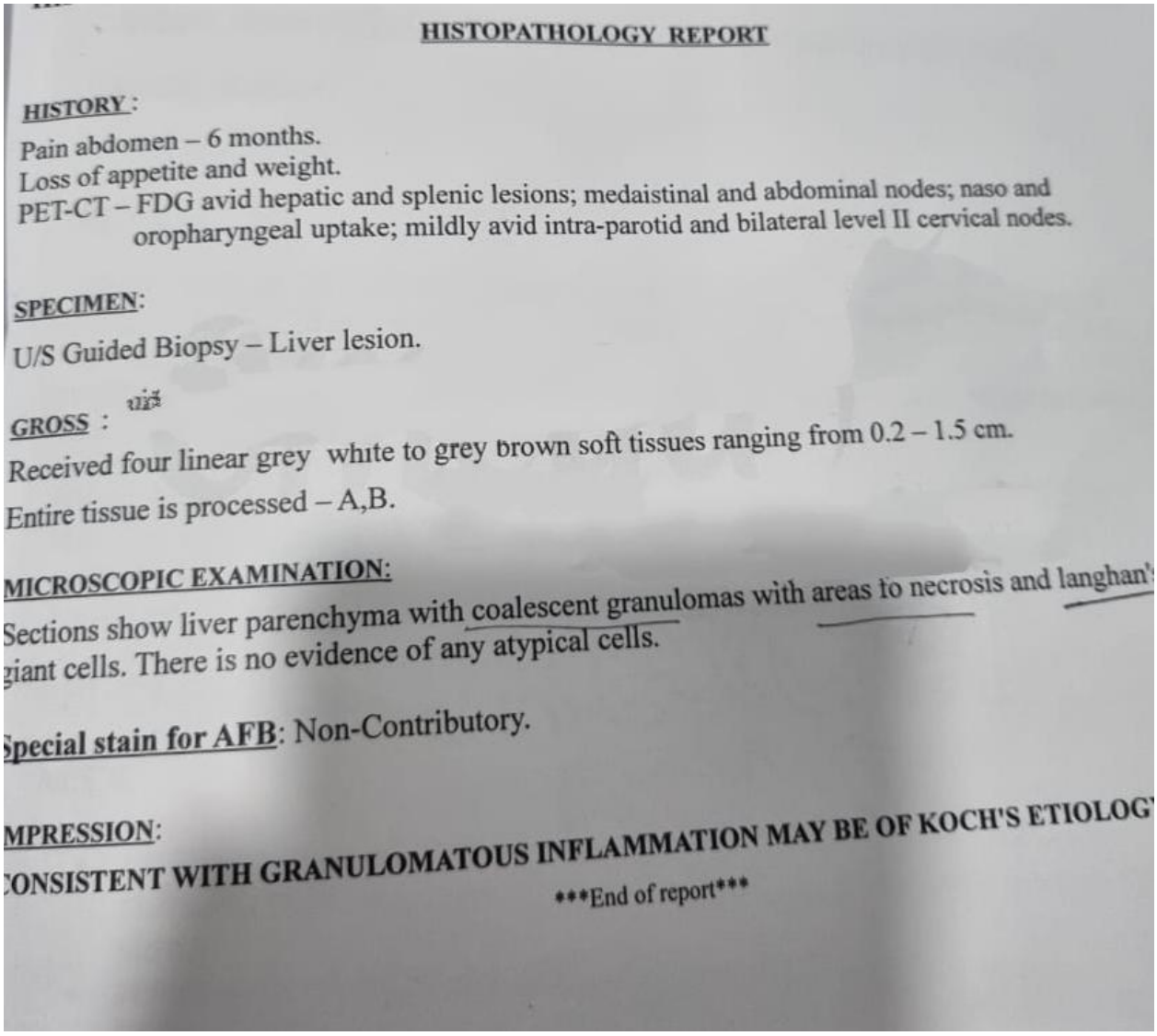
Case Report

This is a case report of 56yr old female, known diabetic, thinly built, presented with complaints of Pain abdomen since 6months, fever since 7 days. The patient had no history of pulmonary or pleural disease. Pain abdomen is present in right hypochondriac and left hypochondriac regions,

sharp pain non radiating in nature. Fever was high graded in nature, intermittent and aggravated in the evening. History of weight loss, decrease in appetite nausea and bloating was noted. Not associated with vomiting, melena, chills altered bowel habits, cough, shortness of breath, hemoptysis and chest pain.

Upon physical examination, her vitals were stable the patient was thinly built and on palpation liver and spleen were enlarged. Upon investigation usg showed hepatomegaly and mild spleenomegaly. A plain radiograph of the chest did not show any abnormaility. Mri showed hepatomegaly with multiple irregular ill defined altered signal intensity areas noted, mild splenomegaly, multiple t2 hypointense altered signal intensity areas note in spleen. Sub centric aorto caval and peri gastric nodes. Small alteed signal intensity lesion in midpole of right kidney showing diffuse restriction. Multiple enlarge periportal portal and peripancreatic nodes. PET CT reveals multiple metabolically active hypoenchanching lesions in both lobes of liver, hypoenhancing lesions in spleen and multiple small lymph nodes present.

- on further investigation- USG guided liver biopsy report show liver parenchyma coalescent granuloma with areas of necrosis and langhans type giant cells consistent with granulomatous inflammation of kochs etiology. A diagnosis of multicentric tuberculosis is established, based on histopathology.



HISTOPATHOLOGY REPORT

HISTORY:
Pain abdomen – 6 months.
Loss of appetite and weight.
PET-CT – FDG avid hepatic and splenic lesions; medaistinal and abdominal nodes; naso and oropharyngeal uptake; mildly avid intra-parotid and bilateral level II cervical nodes.

SPECIMEN:
U/S Guided Biopsy – Liver lesion.

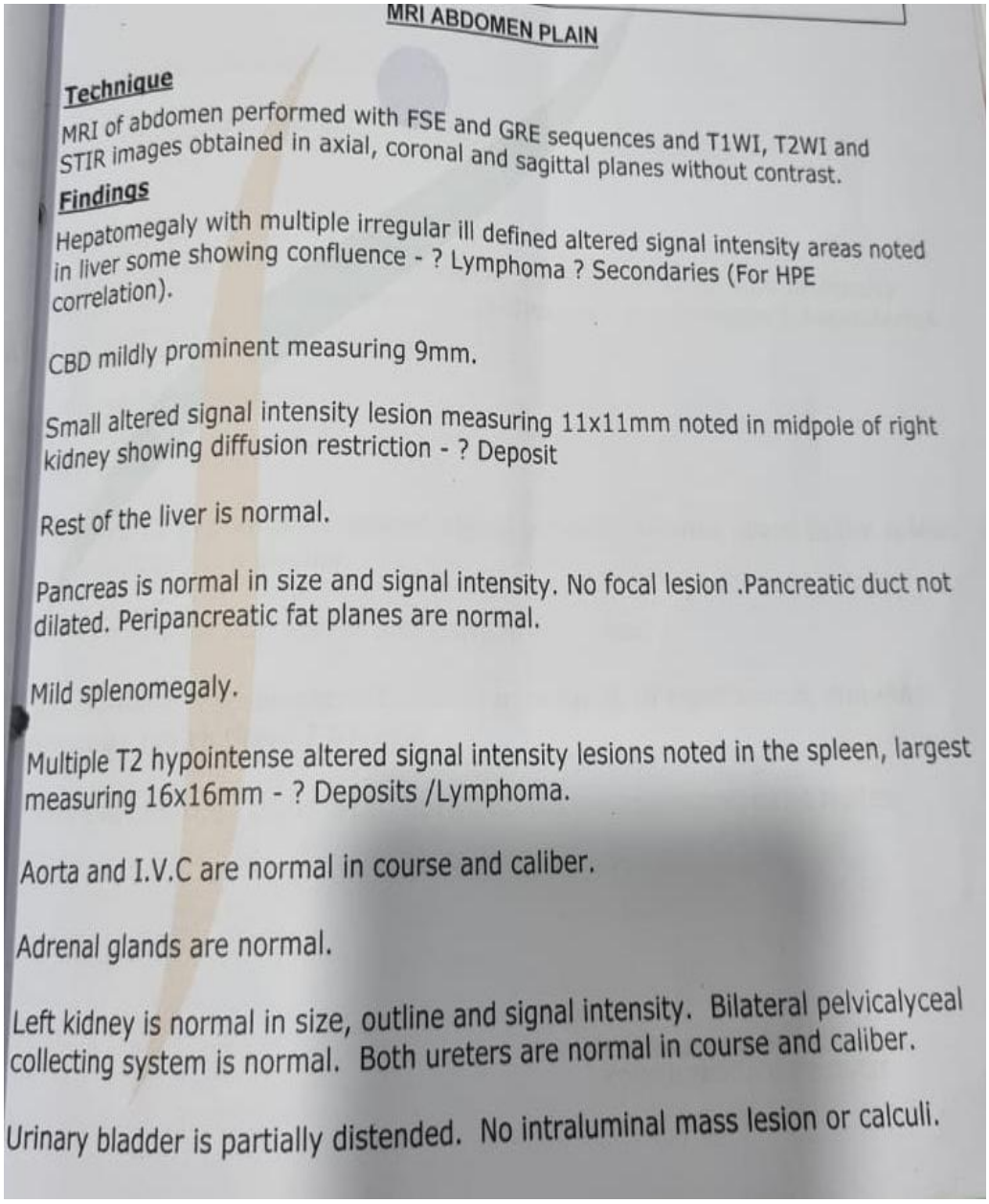
GROSS :
Received four linear grey white to grey brown soft tissues ranging from 0.2 – 1.5 cm.
Entire tissue is processed – A,B.

MICROSCOPIC EXAMINATION:
Sections show liver parenchyma with coalescent granulomas with areas to necrosis and langhan's giant cells. There is no evidence of any atypical cells.

Special stain for AFB: Non-Contributory.

IMPRESSION:
CONSISTENT WITH GRANULOMATOUS INFLAMMATION MAY BE OF KOCH'S ETIOLOG

End of report



MRI ABDOMEN PLAIN

Technique

MRI of abdomen performed with FSE and GRE sequences and T1WI, T2WI and STIR images obtained in axial, coronal and sagittal planes without contrast.

Findings

Hepatomegaly with multiple irregular ill defined altered signal intensity areas noted in liver some showing confluence - ? Lymphoma ? Secondaries (For HPE correlation).

CBD mildly prominent measuring 9mm.

Small altered signal intensity lesion measuring 11x11mm noted in midpole of right kidney showing diffusion restriction - ? Deposit

Rest of the liver is normal.

Pancreas is normal in size and signal intensity. No focal lesion .Pancreatic duct not dilated. Peripancreatic fat planes are normal.

Mild splenomegaly.

Multiple T2 hypointense altered signal intensity lesions noted in the spleen, largest measuring 16x16mm - ? Deposits /Lymphoma.

Aorta and I.V.C are normal in course and caliber.

Adrenal glands are normal.

Left kidney is normal in size, outline and signal intensity. Bilateral pelvicalyceal collecting system is normal. Both ureters are normal in course and caliber.

Urinary bladder is partially distended. No intraluminal mass lesion or calculi.

- The patient was started on Anti TB therapy and it was supplemented with pyridoxine 10mg a day. The patient showed progressive improvement within 1 month of starting the therapy and the patient was on follow up.

Discussion

Multi centric tuberculosis is usually seen in immunocompromise patients, other predisposing factors are intravenous drug use, diabetes mellitus, alcohol abuse and hepatic cirrhosis[1,3]. TB can occur in virtually any abdominal structure. The incidence of abdominal TB is estimated to be 3-4% of the total extra pulmonary TB [12,4]. It occurs by hematogenous or contiguous spread from other organs or by reactivation of latent TB. Less commonly ingeston of unpasteurized milk containing tubercle bacilli. Extra pulmonary tuberculosis may involve skeletal system, abdominal structures, lymph nodes .As in our case there was involvement of liver, spleen, kidney, lymph nodes hence it may be called as multi centric tuberculosis. Weight bearing joints involved in extra pulmonary tuberculosis are the spine, hip, and knees in the order of decreasing frequency[10]. splenic tuberculosis is extremely rare and has no characteristic symptoms or abnormal imaging findings. Therefore it is likely to be misdiagnosed as carcinoma of spleen,

splenic abscess, lymphoma , rheumatic fever or others. Isolated splenic tuberculosis is rare although secondary involvement in military TB is common[2,9]. Hepatic tuberculosis has many faces and the imaging manifestation can show considerable overlap with other relatively more frequent primary or secondary lesions of the liver.

The most common symptoms were fever, abdominal pain and weight loss. Elevation of alkaline phosphatase and gamma glutamyl transfrase was prominent. Lesions can produce mass effect leading to cholestatic jaundice. Spleen and kidney involvement is seen in multicentric TB whch is a rare presentations.

The diagnosis is established by imaging and microscopic or molecular detection of the pathogen. Although ultrasound may suffice in some cases, a contrast enhanced ct scan is the ideal investigation. It can delineate all the lesions. MRI and PET CT can also b useful in these cases[7]. USG guided biopsy helps in confirmation of abdominal TB. Histopathology can reveal the characteristic caseating granulomatous. Nucleic acid amplification by polymerase chain reaction can give confirmatory diagnosis within hours. All the above mentioned tests carry variable sensitivity and in the event of failure to demonstrate the tubercle bacilli,the final diagnosis can stil be arrived at by careful consideration of the demographics, clinical and radiologic features and response to treatment as as done in the case under consideration. The sensitivity of AFB smears obtained from liver tissue has been found to be only 25%.caseating granulomas are seen in 68% of the cases whereas highest diagnostic sensitivity of 86% is seen with PCR.

The general consensus on treatment is a six month course of ATT. The intial two months comprise of the intensive phase with isoniazid, ripampicin, pyrazinamide and ethambutol. For the remaining period isoniazid rifampicin and ethambutol are given. Drug resistance is an emerging problem and it can necessitate the use of more toxic alternative drugs and duration of therapy is also extended.

Conclusion

To conclude a diagnosis of multicentric tuberculosis should be kept in mind in case of patients with atypical presentations in unusual locations with constitutional symptoms in endemic areas especially among undernourished and among those living in poor conditions. Imaging modalities shoul be supplemented with fine needle aspiration or open biopsy to confirm the diagnosis. Timely diagnosis and treatment will prevent further complications. The role of proper multidrug antitubercular therapy needs to be emphasized as tuberculosis can be very well managed with medications.

References

1. Mofredj A, Guerin JM, Leibinger F, Masmoudi R (1999) Primary sternal osteomyelitis and septicaemia due to Staphylococcus aureus. Scand J Infect Dis 31:98–100 [PubMed] [Google Scholar]
2. Singh B, Ramdial PK, Royeppen E, Moodley J, Chetty R. Isolated splenic tuberculosis. Trop Doct. 2005;35:48–49. [PubMed] [Google Scholar]
3. Singh S., Nagaraj C., Khare G. N., Kumaraswamy V. Multicentric tuberculosis at two rare sites in an immunocompetent adult. Journal of Orthopaedics and Traumatology. 2011;12(4):223–225. doi: 10.1007/s10195-011-0157-8. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
4. Epidemiology of extrapulmonary tuberculosis. A comparative analysis with pre-AIDS era. Mehta JB, Dutt A, Harvill L, Mathews KM. Chest. 1991;99:1134–1138. [PubMed] [Google Scholar]
5. Common and uncommon imaging features of abdominal tuberculosis. Gupta P, Kumar S, Sharma V, et al. J Med Imaging Radiat Oncol. 2019;63:329–339. [PubMed] [Google Scholar]
6. Abdominal tuberculosis of the gastrointestinal tract: revisited. Debi U,

Ravisankar V, Prasad KK, Sinha SK, Sharma AK. World J Gastroenterol. 2014;20:14831–14840. [PMC free article] [PubMed] [Google Scholar]

7. Imaging of abdominal tuberculosis. Akhan O, Pringot J. Eur Radiol. 2002;12:312–323. [PubMed] [Google Scholar]
8. A systematic review of hepatic tuberculosis with considerations in human immunodeficiency virus co-infection. Hickey AJ, Gounder L, Moosa MY, Drain PK. BMC Infect Dis. 2015;15:209. [PMC free article] [PubMed] [Google Scholar]
9. Isolated splenic tuberculosis presenting as an unusual splenic mass. Gupta P, Dhaka N, Rohilla M. Int J Mycobacteriol. 2018;7:397–398. [PubMed] [Google Scholar]
10. Tuli S. M. Tuberculosis of the Skeletal System: Bones, Joints, Spine and Bursal Sheaths. New Delhi, India: Jaypee; 1993. [Google Scholar]
11. U Debi, V Ravisankar, KK Prasad, SK Sinha, AK Sharma World J Gastroenterol, 20 (40) (2014), p. 14831 View article Cross Ref View in Scopus Google Scholar
12. Sharma SK. Mohan. A extrapulmonary tuberculosis. Indian j med Res2004; 120:316-53.