

“Tuberculosis of Spleen: Case Report”

* DR.AJITHKUMAR.C.S

ASST PROFESSOR OF PULMONARY MEDICINE, MEDICAL COLLEGE, THRISSUR, KERALA.

*Corresponding author: E-mail – docajith@gmail.com

.....
Abstract :

24year old immunocompetent male patient with fever for 6 weeks duration with left upper abdominal pain. On examination he was febrile with minimal tenderness at left hypochondral area . USS abdomen revealed the splenic abscess. CT abdomen showed multiple hypodense lesions of splenic abscess. Mantoux test was non reactive but ESR was elevated. Laparotomy done revealed the enlarged spleen with attachment to the diaphragm. Histopathology result was of caseating granuloma which were confluent consistent with tuberculosis of spleen.Tuberculous chemotherapy started with 4 drug regime. Patient was also given pneumococcal and influenza vaccination in the post operative period.

Key words: Splenic abscess, tuberculosis,splenectomy

.....

BACKGROUND

Clinically tuberculosis may present as pulmonary or extrapulmonary disease. Extrapulmonary tuberculosis accounts for 15% of tuberculosis. Of all the organs, lung is the predominantly affected organ. Involvement of spleen in tuberculosis occurs in miliary/disseminated form of the disease. However isolated splenic tuberculosis or solitary tuberculosis of spleen is very rare in immunocompetent individuals. When spleen is involved as an isolated organ, patient may have multiple hypoechoic foci less than 2 cm which may be evident on USS and multiple hypodense lesions in CT abdomen. Splenic abscess is a comparatively commoner stage than the solitary or nodular stage when patient seeks medical advice. Isolated splenic tuberculosis abscess is rarely suspected clinically and the diagnosis is made retrospectively.

CASE REPORT

24 year old immunocompetent male patient without any previous history of tuberculosis or family history of tuberculosis presented with left hypochondrial pain and fever for previous 6 weeks. There was no previous

history of contact with tuberculosis. Fever was of low grade with chills and rigor. There was no associated cough, sputum or dyspnea. Abdominal pain on left hypochondriac area was not associated with vomiting or diarrhoea or malena. Examination revealed a moderately built and ill nourished patient with temperature of 38.2⁰ C . Respiratory system examination was within normal limits. Tenderness on deep palpation on left hypochondral area was there without any mass or hepato splenomegaly .There was no ascites. Bowel sounds were normal. Other systems were with in normal limits. Routine work up showed hemoglobin 14.3 grams per dl, total count 7700 cells per cmm with 66% polymorphs, lymphocytes 26%, eosinophils of 8% and ESR of 30 mm in the first hour. Liver and renal function tests were with in normal limits. Serum calcium and phosphorous were 9.3 mg per dl and 4.8 mg per dl respectively. Mantoux test was nonreactive. Sputum AFB was negative. In Chest x ray reading nothing was suggestive of tuberculosis. Ultrasonography of abdomen showed multiple hypoechoic lesion in the spleen with splenomegaly.

Liver was normal and no lymphadenopathy or intra

abdominal collection were seen. CT abdomen revealed multiple hypodense lesions in the spleen consistent with splenic abscess.

Laparotomy was done based on these data. Intraoperatively spleen was found enlarged and found adhered to diaphragm on separation of which pus discharged from spleen. Splenectomy done and was submitted for histopathology examination. Tuberculous splenic abscess was identified by the pathologist and based on this 4 drug antituberculous chemotherapy was started along with other supportive treatments. Patient also received post splenectomy pneumococcal and influenza vaccination

DISCUSSION

Isolated splenic tuberculosis is a very rare manifestation of extra pulmonary tuberculosis in immunocompetent individuals⁹. Here a young HIV negative patient with out prior history of contact with tuberculosis presented with fever and left upper abdominal pain for 6 weeks duration and he had tuberculous splenic abscess. Splenic tuberculosis is a rare form of abdominal tuberculosis. It is usually seen in immunocompromised individuals¹ or as a part of disseminated tuberculosis although it can also be manifested in immunocompetent individuals infrequently⁹. Spleen can be the only site of tuberculous infection (isolated splenic tuberculosis)^{4 7 8 9}. Bhansali et al¹² in a series of 300 patients with abdominal tuberculosis did not encounter even a single case of splenic tuberculosis. Tuberculosis has been reported as a rare cause of splenic abscess¹¹. On USG, splenic tuberculosis usually presented as multiple small hypoechoic lesions^{17,18} and CECT(Fig:1) may demonstrate hypodense lesions^{3,9,18}. The reported yield of aspiration cytology from the splenic lesions is variable. Suri et al reported up to 88% sensitivity for fine needle aspiration cytology (FNAC) for diagnosing

a tuberculous pathology in the spleen¹⁴. On histopathologic examination there will be epithelioid granulomas composed of aggregates of epithelioid cells, lymphocytes and Langhans giant cells with variable degree of central caseous necrosis involving both the red and white pulps (Fig 2,3,4).

There are 5 types of pathomorphological classifications for splenic TB including miliary TB, nodular TB, tuberculous spleen abscess, calcific TB and mixed type TB. Tuberculosis should be considered as one of the differential diagnosis in patients presenting with FUO and splenomegaly especially in areas where the disease is prevalent^{6, 11}. Splenic tuberculosis can even affect immunocompetent individuals⁹. In patients presenting with FUO and splenomegaly, where an exact diagnosis could not be established after all possible and available investigations, splenectomy is strongly recommended for the diagnosis and further treatment. Empirical exposure to antituberculous drugs could be hazardous in these situations as it may mask a definite diagnosis later. At times such patients may not respond to antituberculous drugs and require splenectomy subsequently¹³.

CONCLUSION

Tuberculosis should be considered in the differential diagnosis of patients presenting with Fever of unknown origin and splenomegaly. Splenic tuberculosis can present in isolation without extrasplenic involvement, and even in immunocompetent individuals.



Fig 1: CT abdomen showing multiple hypoechoic lesions of splenic tuberculosis

Fig 2: low power view of caseating granuloma of tuberculous splenic abscess (H&E Stain)

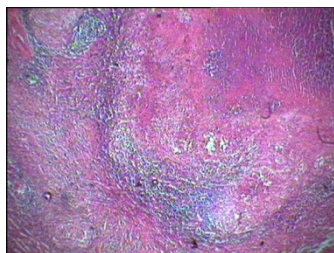


Fig 3: Granuloma with central caseation typical of tuberculosis:

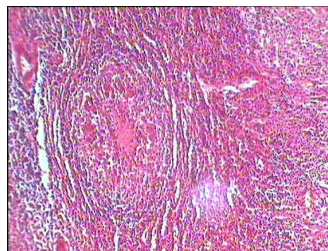
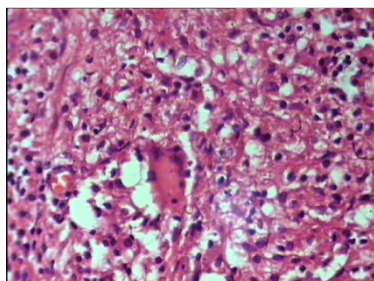


Fig 4: Granuloma with Langerhan's giant cell and epithelioid cells



REFERENCES

- 1.Prathmesh CS, Tamhankar AP, Rege SA, et al. Splenic Tuberculosis and HIV-1 infection. *Lancet*. 2002;369(26):353.
- 2.Thomson SR, Ghimenton F. Splenic Tuberculosis. *Postgrad Med J*. 1999;75(888):578.
- 3.Chandra S, Srivastava DN, Gandhi D. Splenic tuberculosis : an unusual sonographic presentation. *Int J Clin PRact*. 1999 Jun;53(4):318-9.
- 4.Adil A, Chikhaoui N, Ousehal A, et al. Splenic Tuberculosis Apropos of 12 cases. *Ann Radiol (Paris)*. 1995;38(7):403-7.
- 5.Singh B, Ramdial PK, Royeppen E, et al. Isolated splenic tuberculosis. *Trop Doct*. 2005 Jan;35(1):48-9.
- 6.Ho PL, Chim CS, Yuen KY. Isolated Splenic Tuberculosis presenting with pyrexia of unknown origin. *Scand J Infect Dis*. 2000;32(6):700-1.
- 7.Sato T, Mori M, Inamatsu T, et al. Isolated splenic tuberculosis. *Nippon Ronen Igakkai Zasshi*. 1992 Apr;29(4):305-11.
- 8.Fernandez Miranda C,Perpina C KESSLERp,Torres N ,Manion P,Dela Calle A Hepatosplenic Tuberculous abscess in a patient with polyarteritis nodosa *Am J Gastroenterol* 1993 :88:1297-8
9. Sharma S Dey AB Agarwal N .Nagarkar K M Gujral S Tuberculosis : a rare cause of splenic abscess *J*

Assoc Physicians India .1999; 47:740-1

- 10 Bhansali SK. Abdominal tuberculosis: experiences with 300 cases. *Am J Gastroenterol* 1977;67:324–337.
11. Ho PL, Chim CS, Yuen KY. Isolated splenic tuberculosis presenting with pyrexia of unknown origin. *Scand J Infect Dis* 2000;32:700–701
12. Wilde CC, Kueh YK. Case report: tuberculous hepatic and splenic abscess. *Clin Radiol* 1991;43:215–216
13. Nayyar V, Ramakrishna B, Mathew G, Williams RR, Khanduri P. Response to antituberculous chemotherapy after splenectomy. *J Intern Med* 1993;233:81–83.
14. Suri R, Gupta S, Gupta SK, Singh K, Suri S. Ultrasound guided fine needle aspiration cytology in abdominal tuberculosis. *Br J Radiol* 1998;71:723–72
15. Fooladi AAI, Hosseini MJ, Azizi T. Splenic tuberculosis: a case report. *Int J Infect Dis* 2009; 13: e273-e275
16. Ozgüroğlu M, Celik AF, Demir G, Aki H, Demirelli F, MandelN, Büyükcinal E, Serdengeçti S, Berkarda B. Primary splenic tuberculosis in a patient with nasal angiocentric lymphoma:mimicking metastatic tumor on abdominal CT. *J Clin Gastroenterol* 1999; 29: 96-98
17. Porcel-Martin A, Rendon-Unceta P, Bascunana-Quirell A, et al. Focal splenic lesions in patients with AIDS: sonographic findings. *Abdom Imaging* 1998;23:196–200.
18. Jain A, Sharma AK, Kar P, Chaturvedi KU. Isolated splenic tuberculosis. *J Assoc Physicians India* 1993;41:605–606.

Date of Submission: 02 January 2013

Date of Provisional acceptance: 15 February 2013

Date of Final acceptance: 03 March 2013

Date of Publication: 05 March 2013

Source of Support: Nil ; Conflict of Interest: Nil