

CASE REPORT

TUBERCULOSIS OF THE SPLEEN: A CASE REPORT

Somchai Insiripong¹ and Weera Suwanreungsri²

¹Department of Medicine, ²Department of Surgery, Maharat Nakhon Ratchasima Hospital, Nakhon Ratchasima, Thailand

Abstract. A 40-year old Thai male presented with epigastric discomfort and weight loss without fever for 2 months. On examination, there was no hepatosplenomegaly or lymphadenopathy. His ultrasonogram showed multiple lesions in the spleen with enlarged abdominal lymph nodes. Pathology revealed caseating granulomas of the spleen and lymph nodes. No AFB were seen but PCR was positive for *M. tuberculosis complex*. The fever resolved within 3 days of surgery and the patient was treated with antituberculous drugs.

INTRODUCTION

The commonest site of extra-pulmonary tuberculosis (TB) is the lymph nodes (Thompson *et al*, 1992; Gelmacher *et al*, 2002). TB infection of the spleen can be found as a part of miliary TB; isolated TB of the spleen is rare, with few case reports (Das *et al*, 1994; Ho *et al*, 2000). We report a case here.

CASE REPORT

A 40-year old Thai man presented with epigastric discomfort especially after meals for 2 months. He had anorexia and a weight loss of 2 kg. He gave no history of TB contacts or fever. On examination, he was rather thin, had a temperature of 37.3°C. He had no pallor, peripheral lymphadenopathy or hepatosplenomegaly. His laboratory tests were a hematocrit of 39.8%, WBC of 5,100, platelet count of 247,000, neutrophil of 65%, lymphocyte of 31% and eosinophil of 4%. A fasting blood

sugar (FBS) 76 mg/dl, BUN was 9 mg/dl, creatinine was 0.9 mg/dl, total protein was 8.6 g/dl, albumin was 3.0 g/dl, globulin was 5.6 g/dl, AST (SGOT) was 42, ALT (SGPT) was 62, total bilirubin was 0.7, indirect bilirubin was 0.6, direct bilirubin was 0.1 and the alkaline phosphatase was 270 (normal 32-92). He had a normal urinalysis. The ESR was 96/hour. The anti-HIV was negative. The chest X-ray was normal. Gastroscopy was performed due to the epigastric discomfort. The findings were diffuse mild gastritis of the mucosa and the *H. pylori* test was negative.

His ultrasonogram showed multiple hypoechoic lesions 0.7-1.4 cm in diameter in the spleen. He also had multiple enlarged lymph nodes 1.8-2.8 cm in diameter at the pancreatic head, celiac and aortocaval regions. The differential diagnosis included splenic abscess, tuberculosis or lymphoma.

On surgical exploration, there were multiple abscesses of the spleen with enlargement of lymph nodes at the splenic hilum, celiac and hepatic regions, 1-4 cm in size. Multiple nodules 1-2 cm in diameter were also found scattered throughout both lobes of the liver. Splenectomy and hepatic lymph node biopsies were performed.

Correspondence: Somchai Insiripong, Department of Medicine, Maharat Nakhon Ratchasima Hospital, Nakhon Ratchasima 30000, Thailand.
Tel: 081-9556993; Fax 66 (044) 293044
Email: chaikorat@gmail.com

The pathological findings showed a 198 g spleen with caseating granulomas. Stains for AFB and Gram's stain were both negative. A PCR for TB was positive for *M. tuberculosis complex*. Hyaline arteriosclerosis of the splenic vessels was noted. A Congo red stain for amyloid was negative. Pathology of the hepatic lymph nodes revealed caseating granulomatous lymphadenitis.

The fever noted on admission resolved within 3 days after surgery. He was treated with INH, rifampicin, ethambutol and pyrazinamide. At a 4-month follow-up check he had no fever or weight loss.

DISCUSSION

In case of multiple hypoechoic lesions in the spleen accompanied by fever, the differential diagnoses include abscess, TB and lymphoma. The diagnosis of TB of the spleen and hepatic lymph nodes was established with PCR which is a highly sensitive and specific method for the diagnosis of extra-pulmonary TB (Shah *et al*, 1998; Kesarwani *et al*, 2004). As a part of the abdominal lymphatic system, the spleen can become infected with tuberculosis by ingestion of either milk or sputum infected by *Mycobacterium tuberculosis* or by reactivation of the disease where it was initially seeded hematogenously during primary TB infection (Yang *et al*, 1999). In this case, the tuberculosis may have been due to reactivation since there was no history of TB contact. The liver was presumed to be involved since there were nodules in both lobes, an elevated alkaline phosphatase and PCR of the hepatic nodes was positive for *M. tuberculosis complex*. However no biopsy of the liver was performed.

Splenectomy was performed not only for

diagnosis but also for therapy. Anti-tuberculous drugs were deemed necessary to treat the residual lymph nodes and nodules in the liver which were presumed to be tuberculosis also. The regimen and duration of treatment for tuberculous lymphadenitis is the same as the treatment of pulmonary tuberculosis (Van Loenhout-Rooyackers *et al*, 2000).

REFERENCES

- Das S, Chakraborty S, Kundu AK, Banerjee SP, Saha BB. Tuberculosis of spleen-a case report. *Indian J Tuberc* 1994; 41: 263-4.
- Gelmacher H, Taube C, Kroger C, Magnussen H, Kirsten DK. Assessment of lymph node tuberculosis in Northern Germany: a clinical review. *Chest* 2002; 121: 1177-82.
- Ho P-L, Chim C-S, Yuen K-Y. Isolated splenic tuberculosis presenting with pyrexia of unknown origin. *Scand J Infect Dis* 2000; 32: 700-1.
- Kesarwani RC, Pandey A, Misra A, Singh AK. Polymerase chain reaction (PCR): Its comparison with conventional techniques for diagnosis of extra-pulmonary tubercular diseases. *Indian J Surg* 2004; 66: 84-8.
- Shah S, Miller A, Mastellone A, Kim K, *et al*. Rapid diagnosis of tuberculosis in various biopsy and body fluid specimens by the AMPLICOR *Mycobacterium tuberculosis* polymerase chain reaction test. *Chest* 1998; 113: 1190-4.
- Thompson MM, Underwood MJ, Sayer RD, Dookeran KA, Bell PR. Peripheral tuberculous lymphadenopathy: a review of 67 cases. *Br J Surg* 1992; 79: 763-4.
- Van Loenhout-Rooyackers JH, Lahey RJ, Richter C, Verbeek AL. Shortening the duration of treatment for cervical tuberculous lymphadenitis. *Eur Respir J* 2000; 15: 192-5.
- Yang ZG, Min PQ, Son Z, *et al*. Tuberculosis versus lymphomas in the abdominal lymph nodes: evaluation with contrast-enhanced CT. *Am J Roentgenol* 1999; 172: 619-23.