

# A Rare Case of Tuberculosis Psoas Abscess

Nejat Altıntaş, Suna Türkeli, Yasemin Yılmaz, Muzafer Sarıaydın, Nurşen Yaşayancan



## ABSTRACT

Tuberculosis (TB) is a common infectious disease, caused by various strains of mycobacteria, usually *Mycobacterium tuberculosis* in human. Vertebral TB (pott's disease) is the most common form of skeletal TB which may give rise to psoas abscess because of close vicinity. We present a case of a woman who presented to our university hospital with a history of acute on chronic back pain and chronic fatigue. She was subsequently diagnosed with tuberculosis spondylitis (Pott's disease) and Psoas abscess. Surgical drainage with adjuvant anti-tuberculosis therapy was carried out.

**Key words:** Pott's disease, psoas abscess, spinal tuberculosis

## Nadir Psoas Tüberküloz Apse Vakası

### ÖZET

Tüberküloz mikobakterilerin çeşitli alt tipleri tarafından oluşturulan sık görülen bir enfeksiyon hastalığıdır. İnsanlarda genelde *mycobacterium tuberculosis* alt tipi hastalık yapar. Vertebral tüberküloz (pott hastalığı) iskelet sistemi tüberkülozunun en sık görülen formudur. Komşuluk yolu ile psoas apsesine neden olabilir. Bu olgu sunumunda kronik sırt ağrısı zemininde akut sırt ağrısı ve kronik yorgunluk şikayeti ile başvuran, tüberküloz spondilit ve psoas absesi teşhisi konularak cerrahi drenaj ve beraberinde tüberküloz tedavisi başlanan bir kadın hastayı sunuyoruz.

**Anahtar kelimeler:** Pott hastalığı, psoas apsesi, spinal tüberküloz

## INTRODUCTION

Spinal tuberculosis (Pott's disease) is the most common form of skeletal tuberculosis. Infection begins in the antero-inferior aspect of the vertebral body with destruction of the intervertebral disc and adjacent vertebrae. The resulting anterior wedging and angulation of adjacent vertebral bodies with disc space obliteration are responsible for the palpable spinal prominence (gibbus) and a classic radiographic appearance (1). Paraspinal and psoas abscesses can develop with, extensions to the surface or adjacent tissues (2). Psoas abscess due to tuberculosis is not a very common affection for it shows a non-specific symptomatology and therefore, it is associated to late diagnosis (3). The aim of this report is to detail our experience of the difficulties in diagnosing Psoas abscess secondary to Pott's disease, especially in the absence of other specific clinical signs.

## CASE

A 40-year-old woman with complains of fatigue, low back pain for 2 years presented our university hospital. The patient reported a 2-year history of progressive back pain localized to the lower back around the waist line, which was unimproved with leaning forward. The patient reported intermittent numbness and tingling along her right leg extending laterally to the thigh and knee, which was noted to be worsen in the morning. She had subjective weakness in both legs but denied changes in urinary or bowel habits. Ibuprofen partially relieved the back pain. As interesting back ground, she has been investigated in different hospitals with the same complaints in two years and ordered abdomen computed tomography (CT) however definite diagnosis was not made. In her physical examination, She had painful abdomen at palpation at the right iliac fossa. During her follow-up, the

On Dokuz Mayıs University, Faculty of Medicine, Department of Pulmonary Medicine, Samsun, Turkey

Received: 20.12.2010, Accepted: 04.01.2011

Correspondence: Nejat Altıntaş

On Dokuz Mayıs Üniversitesi, Tıp Fakültesi Göğüs Hastalıkları AD. Samsun, Turkey

E-mail: nejataltintas@gmail.com

patient was investigated for the etiology. Ultrasound of the abdomen demonstrated a hypoechoic mass suggestive of psoas abscess. Computed tomography of abdomen revealed a hypodense lesion of the right psoas muscle suggesting abscess with muscular edema and lytic lesions at S1 and S2 vertebral bodies (Figure 1). A needle biopsy of S1 was performed, and pathology revealed necrotizing granulomatous inflammation. Biopsy specimen was sent for polymerase chain reaction (PCR) for *M. tuberculosis*, the result for *M. Tuberculosis* was positive subsequently surgical drainage of the abscess with a great quantity of pus and necrotic tissue was performed and the patient was placed on pharmacological therapy (isoniazid, rifampin, pyrazinamide, and ethambutol). At the moment, The patient is in the third month of the treatment and she is in a very good condition after surgery without symptoms, undergoing anti-tuberculosis treatment

## DISCUSSION

Tuberculosis has been reported in all bones of the body(3,4). Bone and joint involvement account for 35% of cases of extrapulmonary disease, with the spine being the most common (4) and is by definition considered "advanced disease," requiring meticulous assessment and aggressive systemic therapy (5). The exudate formed at lumbar vertebrae most commonly enters the psoas sheath. This manifests radiologically as a psoas abscess or clinically as a palpable abscess in the iliac fossa. The typical clinical presentation of a patient with psoas abscess is a complaint of back pain, associated with fever, chills, weight loss, malaise, and fatigue (6-8).

Computed tomography is of great value in the delineation of encroachment of the spinal canal by posterior extension of inflammatory tissue, bone, or disk material (9). It is useful in assessing bone destruction, in the guidance of biopsies, and in the planning of operative procedures (4). Magnetic resonance imaging (MRI) offers excellent visualization of the bone and soft tissue components of spinal tuberculosis and psoas abscess. It can differentiate compression of the spinal cord caused by granulation material or solid material such as bone or disk (4) and is often used to identify disease at distant asymptomatic sites(9). However, as with plain films, there are no pathognomonic findings on MRI or CT that reliably differentiate tuberculosis from other infections or malignancies (10). PCR analysis was first reported as a useful technique to detect *M. tuberculosis* in clinical specimens in 1989 by Brisson-

Noel et al. from the Pasteur Institute (11). PCR is rapid and reliable test, and the results are available within 6.5 hours, even for contaminated specimens, with reasonable sensitivity (76.4%) and excellent specificity (99.8%) (12). Tissue and body fluid specimens have not been validated as reliable in large case series (13,14). Fine needle aspiration provides a simple and safe outpatient procedure for the diagnosis of osseous TB can reduce the number of surgery (15). The treatment of tuberculous psoas abscess is based on the drainage of the abscess, either percutaneously or surgically, in combination with specific antimicrobial therapy. Bacteriological and histopathological studies of the necrotic content of the Psoas abscess must always be performed. In most cases, evolution is favorable when the treatment is conducted correctly (16).

In conclusion, tuberculosis is still common in our country. The diagnosis of pott's disease should be considered in patients who live in endemic tuberculosis regions have chronic back pain. Microscopy and culture are recommended to confirm the diagnosis. Antimicrobial therapy, usually in multidrug combinations, is the primary spinal TB treatment; however, adjuvant surgical treatment may be warranted in cases of neurologic involvement or medical treatment failure.

## REFERENCES

1. Bhan S, Nag V. *Skeletal tuberculosis*. In: Sharma SK, Mohan A, editors. *Tuberculosis*. New Delhi: Jaypee Brothers Medical Publishers; 2001 p. 237-60.
2. Malaviya AN, Kotwal PP. *Arthritis associated with tuberculosis*. *Best Pract Res Clin Rheumatol* 2003; 17:319-43.
3. Watts HG, Lifeso RM. *Tuberculosis of bones and joints*, *J Bone Joint Surg Am* 1996;78:288-98.
4. Hsu SH, Sun JS, Chen IH, Liu TK. *Reappraisal of skeletal tuberculosis: role of radiological imaging*, *J Formos Med Assoc* 1993;92:34-41.
5. McLain RF, Isada C. *Spinal tuberculosis deserves a place on the radar screen*. *Cleveland Clinic J Med* 2004;71:537-9, 543-9.
6. Sternbach G, Pott P. *Tuberculous spondylitis*, *J Emerg Med* 1996;14:79-83
7. Pande KC, Babhulkar SS. *Atypical spinal tuberculosis*, *Clin Ortho Relat Res* 2002;398:67-74.
8. Jasmer RM, Nahid P, Hopewell PC. *Clinical practice: latent tuberculosis infection*. *N Eng J Med* 2002;347(23): 1860-6
9. Pantongrag-Brown L, Suwanwela N. *CT findings in tuberculous spondylitis*. *Aust Radiol* 1992;36:4-7
10. Sinan T, Al-Khawari H, Ismail M, Ben-Nakhi A, Sheikh M,

- Spinal tuberculosis: CT and MRI feature. Ann Saudi Med* 2004;24:437-41
11. Brisson-Noel A, Gicquel B, Lecossier D, Levy-Frebault V, Nassif X, Hance AJ. Rapid diagnosis of tuberculosis by amplification of mycobacterial DNA in clinical samples. *Lancet* 1989;2:1069-71.
  12. Uzunkoy A, Harma M, Harma M. Diagnosis of abdominal tuberculosis: experience from 11 cases and review of the literature. *World J Gastroenterol* 2004;10:3647-49.
  13. Shah S, Miller A, Mastellone A, 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.
  14. Yun YJ, Lee KH, Haihua L, et al. Detection and identification of Mycobacterium tuberculosis in joint biopsy specimens by rpoB PCR cloning and sequencing. *J Clin Microbiol* 2005;43:174-8.
  15. Handa U, Garg S, Mohan H, Garg SK. Role of fine-needle aspiration cytology in tuberculosis of bone. *Diagn Cytopathol* 2010;38:1-4.
  16. Maron R, Levine D, Dobbs TE, Geisler WM. Two cases of Pott disease associated with bilateral psoas abscesses. *Spine* 2006;31:E561-E564