

## **Psoas abscess secondary to tuberculous lymphadenopathy: case report**

**S. Fitoz,<sup>1</sup> C. Atasoy,<sup>1</sup> A. Yagmurlu,<sup>2</sup> S. Akyar<sup>1</sup>**

<sup>1</sup>Department of Radiology, University of Ankara, School of Medicine, Ibn-i Sina Hospital, 06100, Sıhhiye, Ankara, Turkey

<sup>2</sup>Department of Pediatric Surgery, University of Ankara, School of Medicine, 06100, Dikimevi, Ankara, Turkey

Received: 4 August 2000/Accepted: 6 September 2000

### **Abstract**

Tuberculous psoas abscesses, a well-known sequel of tuberculous spondylitis, very rarely develop without concomitant spinal involvement. We report a unique case where a psoas abscess was secondary to retroperitoneal tuberculous lymphadenopathy in a 13-year-old boy who had no demonstrable findings of spinal tuberculosis. Computed tomography showed an obvious communication between the necrotic and calcified retroperitoneal lymph node and the psoas abscess. To the best of our knowledge, fistulization of tuberculous lymph nodes into the psoas sheath has not been reported in the English-language literature.

**Key words:** Tuberculosis—Psoas abscess—Computed tomography.

Paravertebral abscesses are generally a late finding of tuberculous spondylitis, and their tuberculous origin can easily be suggested when the typical vertebral lesions and intervertebral disk destruction are recognized [1]. Although rare, tuberculous psoas abscesses can develop without demonstrable spinal involvement [2–6]. In this report, we describe an extensive psoas abscess formed by fistulization of necrotic retroperitoneal lymph nodes in a patient who was receiving chemotherapy for tuberculosis.

### **Case report**

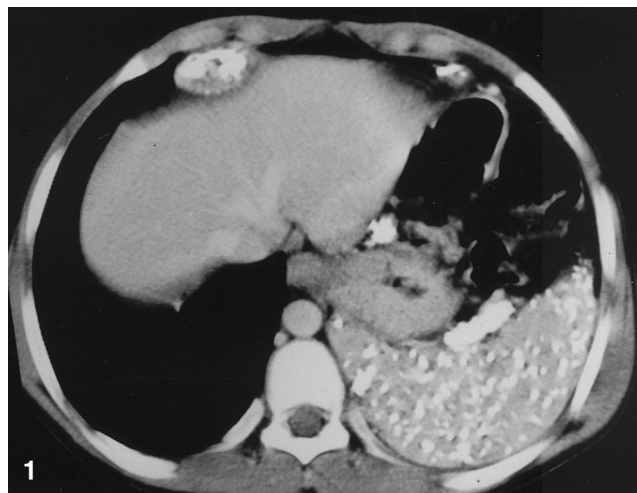
A 13-year-old male patient presented with nontender swelling in the neck and right groin. History revealed an

initial diagnosis of tuberculosis 9 years previously and, despite chemotherapy, several episodes of recurrences with lymphadenopathy and formation of mediastinal abscesses with cutaneous fistulization, which had been surgically excised and drained. Physical examination showed a fluctuating mass in the left side of the neck and a hard nontender mass in the right lumbar and inguinal regions. Abdominal computed tomography (CT) demonstrated disseminated punctate calcifications in the spleen, multiple enlarged paraaortic and mesenteric lymph nodes with necrosis and calcifications, and a partly calcified right psoas abscess (Fig. 1). The contiguity and apparent communication of the psoas abscess with the necrotic retroperitoneal lymph nodes and absence of radiologic findings of spinal involvement suggested that the psoas abscess resulted from fistulization of paraaortic lymph nodes into the psoas sheath (Fig. 2). These findings were confirmed at surgery, where the psoas abscess was drained and the necrotic lymph nodes were excised. Culture did not grow *Mycobacterium tuberculosis*, and the psoas abscess was considered to be a sterile cold abscess.

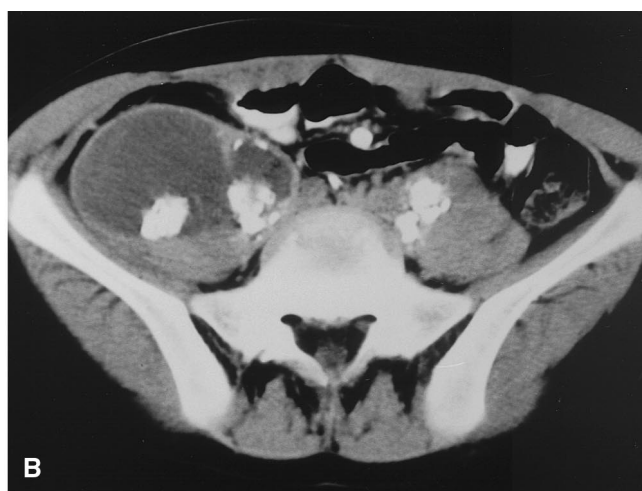
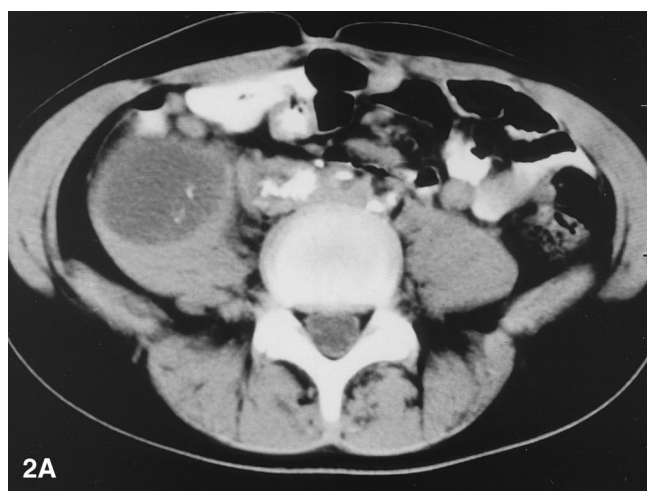
### **Discussion**

Psoas abscesses are a well-known accompaniment of tuberculous spondylitis. In tuberculous spondylitis, destruction of the cortical bone and elevation of the periosteum lead to formation of a paraspinous abscess. The inflammatory mass may penetrate the periosteum and form a psoas abscess, which may extend inferiorly as far as the groin and thigh under the psoas sheath [7]. Although this is the usual pathogenetic mechanism, a few investigators have reported psoas abscesses in the absence

Correspondence to: S. Fitoz



**Fig. 1.** Axial contrast-enhanced CT shows widespread punctate calcifications and parenchymal heterogeneity in the spleen, consistent with tuberculous involvement. Also note calcified lymph nodes in the splenic hilus and in the left gastric and right upper diaphragmatic regions.



**Fig. 2. A** There are multiple parailiac and mesenteric lymph nodes, some containing necrosis and calcification. A hypodense mass lesion with calcifications is noted in the right psoas compartment. **B** At a lower level, direct communication between the necrotic lymph node and the psoas abscess is demonstrated.

of obvious tuberculous spondylitis and findings of tuberculosis elsewhere in the body [4, 6]. There also have been sporadic case reports describing formation of psoas abscesses secondary to renal and colonic tuberculosis and retroperitoneal tuberculous lymphadenopathy [2, 3, 5, 6]. Lymph nodes are well-known sites of recurrence of tuberculosis even under treatment [6], and upper paraaortic lymph nodes are typically involved in abdominal tuberculosis. Perros et al. reported of a case with left-sided psoas abscess and enlarged retrocaval lymph node and speculated that the necrotic lymph node was the cause of the psoas abscess [2]. However, they did not mention whether there was a direct communication between the lymph node and the abscess either radiologically or at surgery [2]. To our knowledge, this is the first description of a fistulous communication between a tuberculous retroperitoneal lymph node and a cold abscess that was diagnosed by radiologic means preoperatively and confirmed surgically. Our case underscores the fact that necrotic lymph nodes may fistulize into the psoas sheath and must be considered as the potential source

of psoas abscesses in patients without obvious spinal involvement.

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