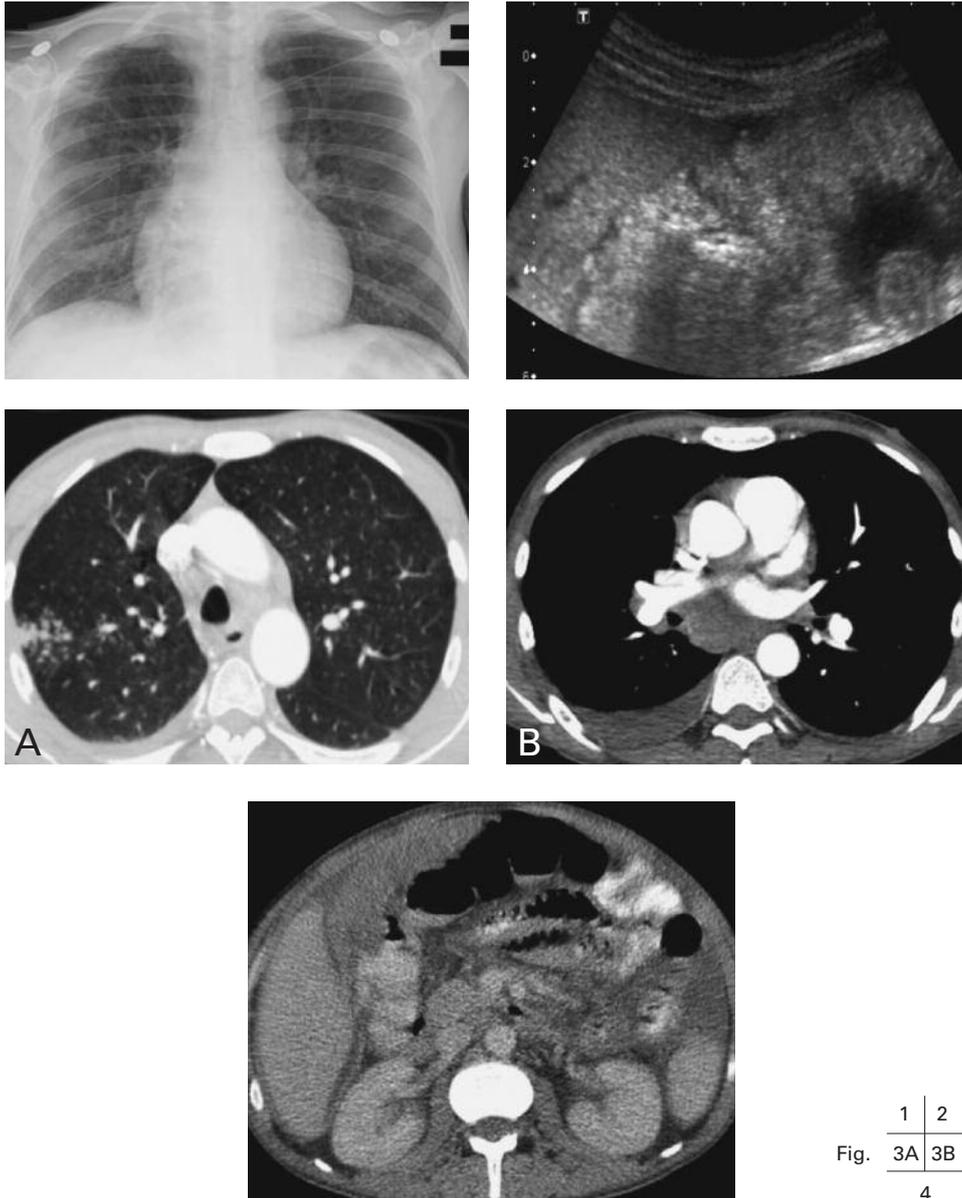


ABDOMINAL AND THORACIC TUBERCULOSIS IN A HIV POSITIVE PATIENT

D. Duterloo, S.T. Bodewitz¹

Key-word: Tuberculosis, gastrointestinal

Background: A 40-year-old Asian man, living in The Netherlands for the last three years, presented with complaints of continuous abdominal pain and bloody diarrhea, which he had since a couple of days. On physical examination, his abdomen was swollen but soft and nontender.



	1	2
Fig.	3A	3B
	4	

1. Department of Radiology, St Elisabeth Hospital, Tilburg, The Netherlands

Work-up

Radiography of the chest (Fig. 1) shows a small area of infiltration-consolidation at the lower part of the right lung.

Abdominal US (Fig. 2) demonstrates omental thickening and ascites.

On contrast-enhanced CT scan of the chest (Fig. 3) there is a small area of nodular infiltration ('tree in bud' pattern) peripherally in the right lung, possibly due to bronchial spread of infection, as well as mediastinal lymphadenopathy and pleural fluid on the right side.

On contrast-enhanced CT scan of the abdomen (Fig. 4), there is presence of omental thickening, ventrally on the right side, as well as ascites.

Radiological diagnosis

Needle aspiration of ascites was performed, demonstrating reactive changes without malignant cells. During his stay in hospital, the patient proved to be HIV-positive. Biopsy of the omental thickening, performed later, showed acid-fast rods.

Based on CT findings, combined with the presence of acid-fast bacteria in the biopsy material (thickened omentum), the diagnosis *gastrointestinal tuberculosis in a HIVpositive patient* was made.

Discussion

Gastrointestinal (GI) tuberculosis (TB) may involve any part of the gut, although the ileum and colon are more frequently affected. The ileocecal region is the most common site of involvement. A minority of patients (20-25%) with GI TB (< 50%) present with abnormal findings on radiograph or CT scan of the chest, consisting of patchy to nodular infiltration. Non-specific symptoms such as weight loss and abdominal pain are present in 80-90% of the patients with GI TB. More rare symp-

toms include malabsorption, diarrhea and hematochezia.

Pathologically, GI TB is characterized by inflammation and fibrosis of the bowel wall and regional lymph nodes. Mucosal ulceration results from necrosis of Peyer patches, lymph follicles, and vascular thrombosis.

At this stage of the disease, changes are reversible and healing without scarring is possible. As disease progresses, the ulceration becomes confluent and extensive fibrosis develops leading to bowel wall thickening, pseudotumoral mass lesions and ascites.

On CT scan, irregular soft tissue densities in the omentum, low-attenuating masses surrounded by thick solid rims, low-attenuating necrotic (most often mesenteric) lymph nodes, disorganized appearance of soft-tissue densities, high-attenuating ascitic fluid and bowel loops forming poorly defined masses can be seen, together with a multilobular enhancement pattern after intravenous administration of iodinated contrast material.

The differential diagnosis of GI TB includes Crohn's disease, non-Hodgkin lymphoma, yersiniosis, South American blastomycosis, and anisakiasis. Differentiating Crohn's disease from TB before treatment initiation is important, as steroid therapy can be catastrophic in patients with undiagnosed TB. Targeted biopsy is currently considered the most rapid and efficient method for this differentiation.

Bibliography

1. Anand M.K.N., Reddy J.J.M., Khan A.N.: Tuberculosis, Gastrointestinal. <http://emedicine.medscape.com> (last update January 19, 2007).
2. Epstein B.M., Mann J.H.: CT of abdominal tuberculosis. *AJR*, 1982, 139: 861-866.
3. Herchline T., Amorosa J.K.: Tuberculosis. <http://emedicine.medscape.com/> (last update January 20, 2009).