Abdominal lymphadenopathy in Whipple disease

Clinical History:

The patient had a history of fatigue, loss of appetite and weight loss of more than 9 kg for one year. He presented with arthralgias and intermittent fever during the past three months.

Imaging Findings:

Abdominal computed tomography demonstrated giant low-attenuation lymph nodes in the mesentery and retroperitoneum with a fatty appearance. Biopsy of lymph nodes was performed. The biopsy specimen showed numerous aggregates of foamy macrophages containing PAS-positive material.

Discussion:

Whipple disease, first described by George Whipple in 1907, is an uncommon systemic bacterial disease that can involve multiple organ systems with a wide variety of manifestations. Gastrointestinal involvement is common with malabsorption being the chief manifestation, however, the clinical features may be diverse (lymphadenopathy, seronegative arthritis, low grade fever, neurologic, cardiac and dermatologic manifestations). Whipple disease is the result of an infection by a gram-positive bacterium, Tropheryma whippelii. Histopathologically, the appearance of the small bowel mucosa is diagnostic – large foamy macrophages infiltrate the lamina propria and distort the villous architecture. Lymphatic dilatation and infiltrating PAS-positive macrophages that contain gram-positive bacilli are specific and diagnostic for Whipple disease. PCR is used to confirm the diagnosis.

The disease is more common in middle-aged Caucasians, with a male preponderance. The most common symptoms are diarrhoea and weight loss that is often preceded by fevers and rheumatoid factor-negative oligo- or polyarthralgia. The nonintestinal symptoms may precede the gastrointestinal symptoms by several years. Radiologic signs include marked thickening of the mucosal folds of the proximal portion of the small bowel and retroperitoneal and mesenteric adenopathy.

Administration of antibiotic therapy has been successful in treatment with prompt clinical response. Documentation of eradication is mandatory to reduce relapse and promote long-term treatment responsiveness.

Differential Diagnosis List: Whipple disease, Lymphoma, Abdominal tuberculosis, Infection with Mycobacterium avium-intracellular complex, Malignant lymph nodes

Final Diagnosis: Whipple disease
References:

Chhabria MA, Dalal RJ, Desai DC, Deshpande RB (2010) Whipple’s Disease. JAPI 58:196-7 (PMID: 20848823)
Description: Axial contrast-enhanced CT imaging shows mesenteric and retroperitoneal lymphadenopathy with a mixed soft tissue and fatty appearance. Origin:
Figure 2

**Description:** Coronal contrast-enhanced CT imaging shows massively enlarged retroperitoneal nodes with a mixed soft tissue and fatty appearance. **Origin:**
Description: Coronal contrast-enhanced CT imaging shows significant adenopathy with low-attenuation centres. Origin: