

CERVICAL TUBERCULOUS LYMPHADENITIS

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Key-word: Tuberculosis, soft tissues

Background: A 44-year-old man with no previous history presented to the ENT-department with a painless neck swelling for more than 5 weeks. He also reported night sweats. Clinical examination confirmed a bilateral neck swelling which was firm and tender at palpation without associated signs of inflammation or infection. There were no pulmonary complaints and chest radiograph showed no abnormalities.

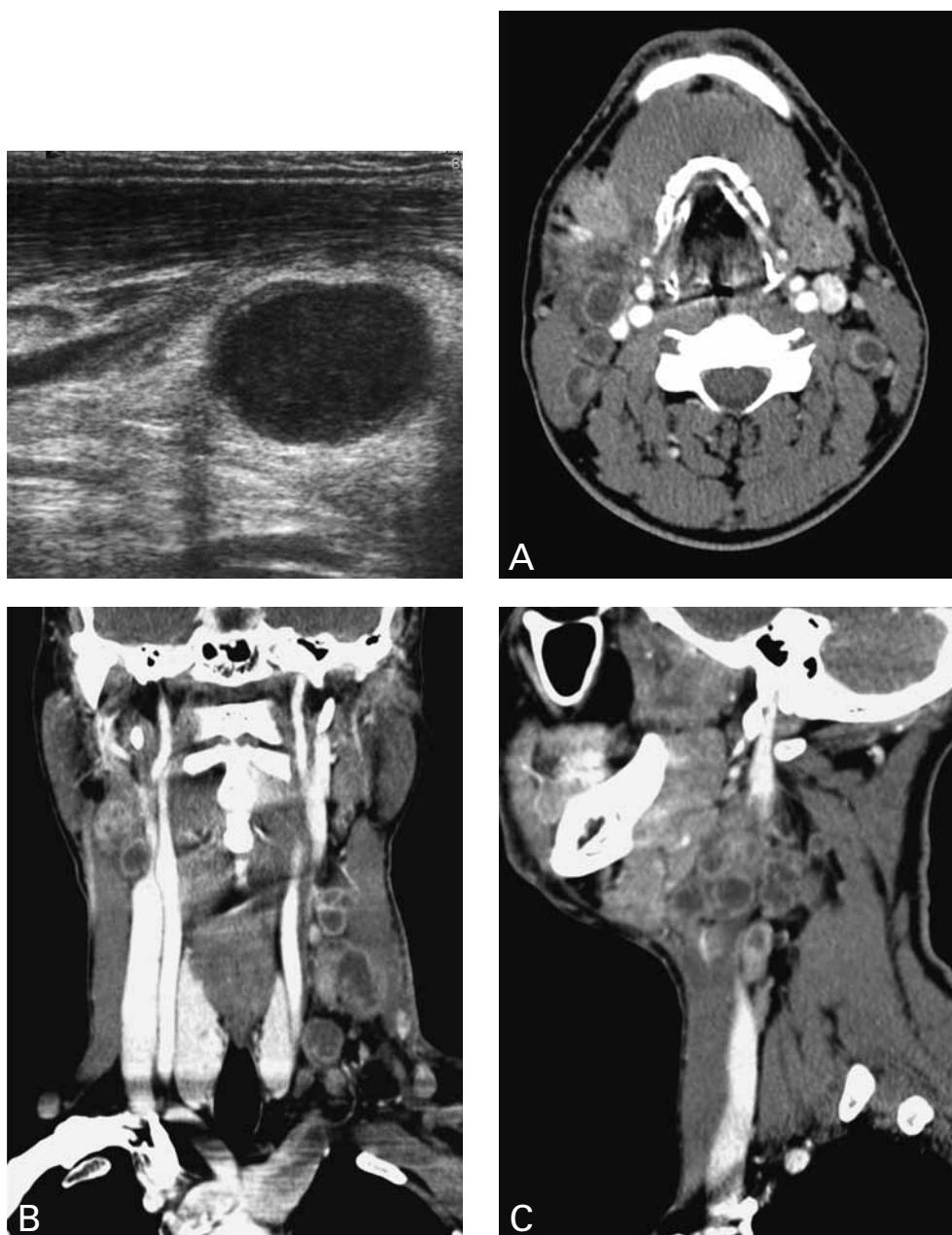


Fig. 1 2A
2B 2C

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Work-up

Ultrasonography of the right neck (Fig. 1) shows a round enlarged lymph node with a hypo-echogenic aspect and absence of fatty hilum.

Contrast-enhanced CT scan of the neck (Fig. 2) demonstrates on axial (A), coronal (B) and sagittal (C) images multiple enlarged jugulodigastric lymph nodes with central hypodense aspect and peripheral rim enhancement.

Radiological diagnosis

Based on clinical and imaging findings, the diagnosis of *cervical tuberculous lymphadenitis* was made. Polymerase chain reaction (PCR) of the fine needle aspirate confirmed the presence of *Mycobacterium tuberculosis*.

Discussion

As a consequence of increasing immigration and rising immunosuppression caused by HIV and transplantation, the resurgence of tuberculosis in non-endemic populations is a fact. 15% of extrapulmonary manifestations of tuberculosis involve the lymph nodes of head and neck. Cervical tuberculous lymphadenitis – also known as “scrofula” – is the commonest form of head and neck tuberculosis. Cervical or supraclavicular lymph nodes are most commonly involved. When more inferior nodes are affected, the prevalence of concomitant pulmonary tuberculosis should be suspected.

Patients usually present with a bilateral painless neck mass. Local signs of inflammation are absent unless there is a superimposed infection. In most cases little or no constitutional symptoms such as fever, weight loss and night sweats are present and thus the clinical diagnosis is very difficult.

On ultrasonography nodes are typical oval or round, hypo-echogenic with absence of an echogenic hilum and show intranodal necrosis.

Findings on CT scan depend on the stage of the disease. In the early phase the affected lymph nodes are homogeneous. With disease progres-

sion, nodes become more necrotic. In this stage, CT shows nodes with a centre of low attenuation corresponding to caseation and liquefaction necrosis. Infiltration of adjacent fat planes is often minimal or absent.

On MRI the central necrosis correlates with low signal intensity on T1-weighted images and high signal intensity on T2-weighted images. On both CT and MRI, lesions show extensive peripheral rim enhancement, which represents granulation tissue with inflammatory hypervascularity. After treatment, lesions often become fibrotic and calcified.

The differential diagnosis of homogeneous lymph nodes as seen in the initial stage is very broad and includes numerous infectious and inflammatory conditions as well as metastatic disease. Main differential diagnosis of lymphadenitis with central necrosis and peripheral rim enhancement is metastatic squamous cell carcinoma. Inflammatory nodes often have a thick irregular enhancing rim, whereas metastatic nodes tend to have a thin rim of contrast enhancement. Metastatic thyroid carcinoma is the main differential diagnosis of calcified cervical lymph nodes.

In conclusion, the presence of cervical lymphadenopathies with central necrosis and extensive irregular peripheral rim enhancement should alert the radiologist to the possible diagnosis of tuberculous lymphadenitis.

Definite diagnosis requires fine needle aspiration (FNA) with PCR since cultures are often negative.

Bibliography

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