Peripheral Rim Enhancement in Tuberculous Mediastinal Lymph Nodes

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A 50-year-old Arab woman presented with a 3-month history of fever, weight loss, and tiredness. She noticed mild shortness of breath on exertion a month before presentation. She looked fairly healthy, a few cervical lymph nodes were palpable, and the chest examination showed features of a right-sided pleural effusion. A chest radiograph showed a right pleural effusion and mediastinal widening. Computed tomography (CT) confirmed massive mediastinal lymphadenopathy (Figures 1 and 2). The largest lymph node was seen in the right para tracheal area measuring 5 × 3.5 cm. Bilateral pleural effusions were also seen. As seen in the figures, all the lymph nodes showed characteristic central low attenuation with a peripheral rim of enhancement (arrows). A cervical lymph node biopsy showed caseating necrosis and a few acid-fast bacilli, confirming the diagnosis of tuberculosis. HIV serology was negative. CT accurately defines the extent and placement of the lymph nodes. The low attenuation necrotic lymph nodes with rim enhancement after contrast infusion strongly suggest a diagnosis of mycobacterial infection.1 A similar appearance may be seen in patients with fungal infection, especially Cryptococosis or Histoplasmosis. This appearance is usually not observed in other causes of mediastinal lymphadenopathy such as metastatic carcinoma, lymphoma, sarcoidosis, or leukemia. Low attenuation areas within the nodes represent areas of caseation necrosis and may be a reliable indicator of disease activity.2,3

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