

Classical Hodgkin's lymphoma infiltrated both lungs

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Abstract: Usually Hodgkin's lymphoma occurs in the mediastinum and head and neck regions. On rare occasions, the first manifestation of Hodgkin's lymphoma may be a disorder of an extranodal site, such as the gastrointestinal tract, nasopharyngeal region, central nervous system, kidney, or other sites. Few cases of classical Hodgkin's lymphoma with pulmonary infiltration have been reported in the literature. Herein, we report a case of classical Hodgkin's lymphoma with infiltration of both lungs. Ultrasound detected many enlarged lymph nodes in the neck region, without blood flow signals shown by Color Doppler Flow Imaging CDFI. The chest CT scan revealed many enlarged lymph nodes in the mediastinum and multiple scattered consolidation lesions involving both lungs. The diagnosis of classical Hodgkin's lymphoma, nodular sclerosis subtype, was made on a subsequent cervical lymph node biopsy.

Key Words: Classical Hodgkin's lymphoma; lung



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A 26-year-old male complained of continued cough with small amount of white sputum for more than 2 months and a rapidly growing neck mass for 2 weeks. His medical history and laboratory examination were unremarkable, except routine blood examination showing WBC was $17.56 \times 10^9/L$. Ultrasound detected multiple abnormal enlarged lymph nodes in bilateral neck region, size of the largest one was 40 mm × 28 mm, with clear border, while Color Doppler Flow Imaging (CDFI) showed no obvious blood flow signals (*Figure 1*). Chest X-ray and CT scan revealed multiple scattered consolidation lesions involving bilateral lungs and many enlarged lymph nodes in the mediastinum and bilateral hilums. Both lymph nodes and pulmonary infiltration lesions slightly enhanced after contrast administration (*Figures 2,3*). A sarcoidosis or blood system tumor was suspected. After cervical lymph node biopsy, histologic examination and immunohistochemical analysis made the diagnosis of classical Hodgkin's lymphoma (nodular sclerosis subtype) by finding the diagnostic Reed-Sternberg cells and CD30 positive (*Figure 4*).

Although it is unknown whether this case represents primary pulmonary Hodgkin's lymphoma or it reflects

secondary involvement by nodal Hodgkin's lymphoma. The rarity of pulmonary Hodgkin's lymphoma may lead to it being not considered in the differential diagnosis of a pulmonary lesion.



Figure 1 Ultrasound shows one of the enlarged subcutaneous lymph nodes in the cervical region, with clear border, no obvious blood flow signal found by Color Doppler Flow Imaging

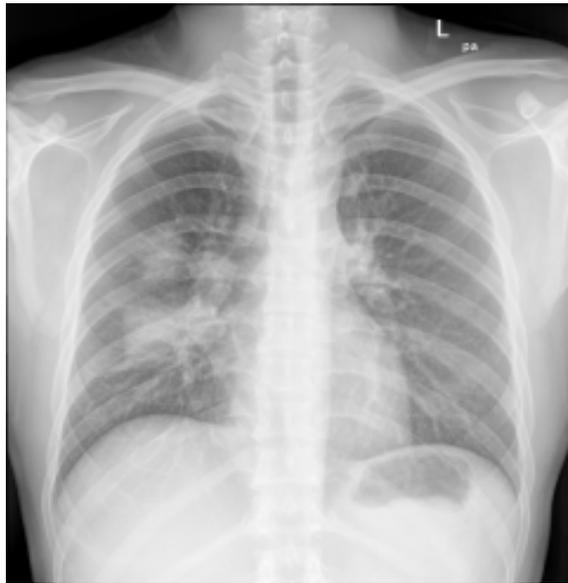


Figure 2 Chest X-ray reveals multiple scattered consolidation lesions involving both lungs, showing mass-like features, with different size, mainly on the right lung

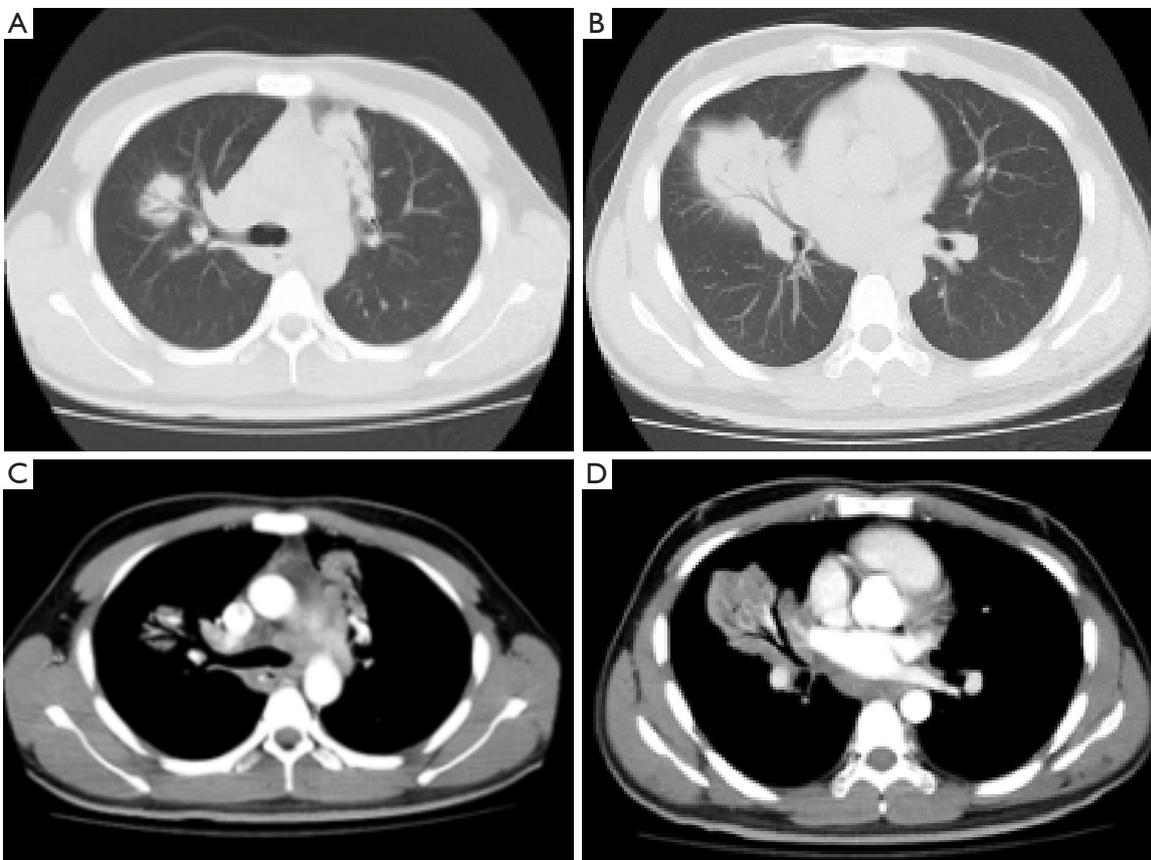


Figure 3 Chest axial CT scan (A&B: lung window) demonstrates multiple scattered mass-like lesions in both lungs, with air-bronchogram inside. Chest axial CT scan (C &D: mediastinal window) demonstrates many enlarged lymph nodes in the mediastinum and hilum, slightly enhanced after contrast administration

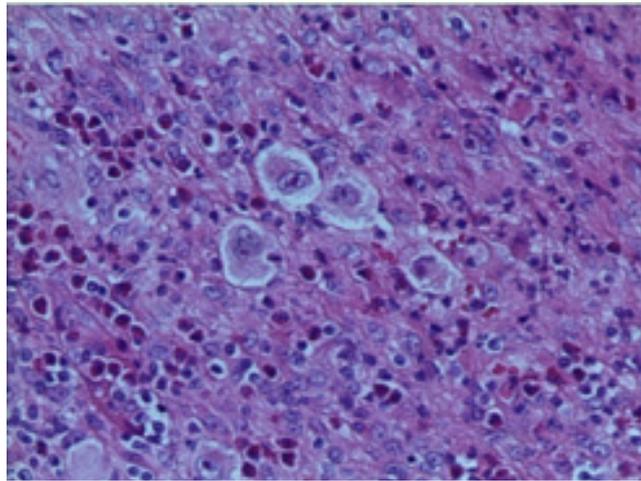


Figure 4 Photomicrograph showing Reed-Sternberg cells as in 'Classical Hodgkin's Lymphoma' disease on a background of mixed inflammatory cells (H&E staining, original magnification $\times 400$), with immunohistochemical staining showing CD30 positive

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