

Lymphoma Associated with Epstein-Barr Virus-Positive Pyothorax

Key words: pyothorax-associated lymphoma, Epstein-Barr virus, pulmonary tuberculosis, tuberculous pleuritis, artificial pneumothorax

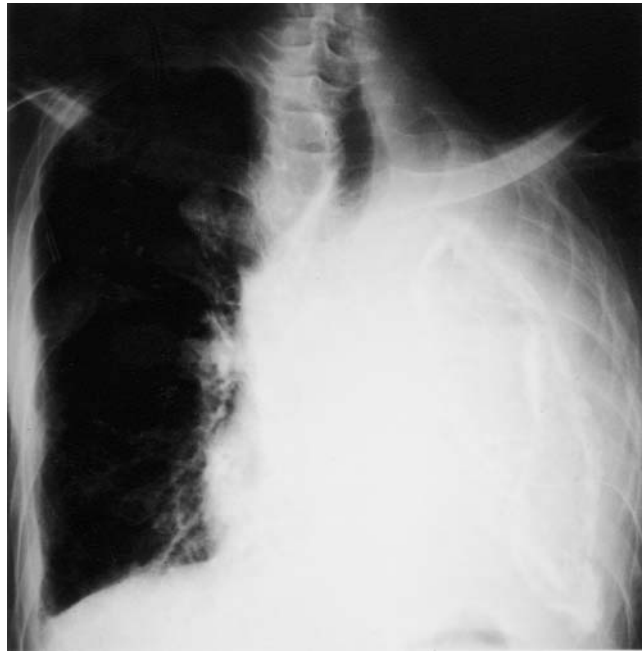


Figure 1. Admission chest radiography showing complete opacity of the left lung with extensive calcification of the pleura.

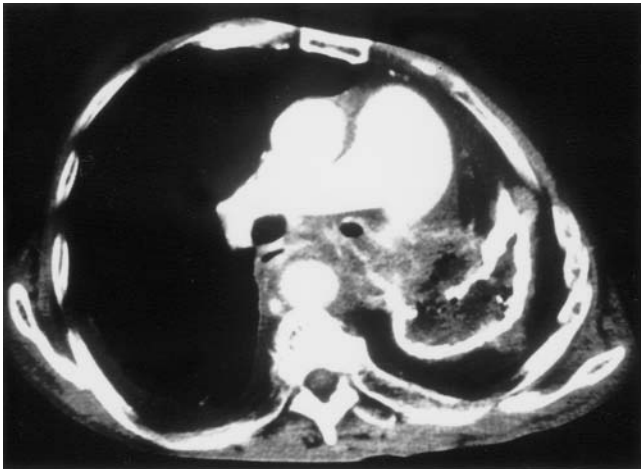


Figure 2. Chest computed tomography showing tumor masses in and around the pleural cavity with extension to the mediastinum.

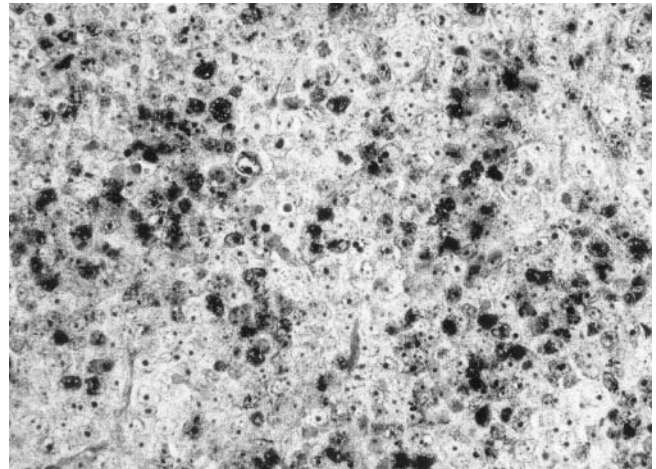


Figure 3. Epstein-Barr virus-encoded RNA (EBER) in situ hybridization showing positive signals in the nuclei of lymphoma cells ($\times 200$).

A 67-year-old man developed hoarseness and dysphagia. He had a 40-year history of pyothorax as a sequel of artificial pneumothorax for the treatment of pulmonary tuberculosis. Admission chest radiography showed a total opacity of the left lung with extensive calcification of the pleura (Fig. 1). Computed tomography revealed tumor masses in and around the pleural cavity with extension to the mediastinum and impingement on the esophagus (Fig. 2). There was neither lymphadenopathy nor hepatosplenomegaly. Abnormal laboratory data included high serum levels of lactic dehydrogenase (802 IU/l; normal range, 230–420 IU/l) and soluble interleukin-2 receptor (2,080 U/ml; normal range, 220–530 U/ml). A needle biopsy specimen showed diffuse large B-cell lymphoma. The lymphoma cells were positive for Epstein-Barr virus-encoded RNAs (EBERs) (Fig. 3). The patient was treated with combination chemotherapy (cyclophosphamide doxorubicin, vincristine, prednisolone) and obtained some response. Radiotherapy was also given to the mediastinum to alleviate dysphagia. However, the tumor gradually regrew and he expired five months after admission. Pyothorax-associated lymphoma (PAL) is a distinct B-cell neoplasm arising in the pleural wall of patients with long-standing pyothorax resulting from tuberculous pleuritis or artificial pneumothorax for the treatment of pulmonary tuberculosis. Epstein-Barr virus has been implicated in the lymphomagenesis of PAL.

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