A video-assisted thoracoscopic biopsy for T-cell lymphoblastic lymphoma

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DESCRIPTION
A previously healthy 38-year-old man presented with a 2-week history of progressive dyspnoea on exertion. Chest CT revealed an anterior mediastinal mass and massive left pleural effusion with multiple pleural nodules. Positron emission tomography showed uptakes of fluoro-deoxyglucose in the mediastinal mass and pleural nodules (figure 1A). Thoracentesis showed a lymphocyte-dominant exudative pleural effusion with no malignant cells or elevated adenosine deaminase. Serum lactate dehydrogenase and soluble interleukin-2 receptor were within normal levels. CT-guided biopsy of the mediastinal mass revealed fibrosis accompanied by foci of terminal deoxynucleotidyl transferase positive T-cells. Furthermore, we performed a video-assisted thoracoscopic biopsy of the polypoid tumours derived from the left pleura (figure 1B and video 1). That specimen abundantly contained malignant cells consistent with T-cell lymphoblasts. No involvement of the peripheral blood or bone marrow was observed. Consequently, we diagnosed T-cell lymphoblastic lymphoma. After the combination of cyclophosphamide, vincristine, doxorubicin and dexamethasone (ie, hyper-CVAD chemotherapy), the patient’s symptoms and pleural effusion resolved.

The differential diagnosis of anterior mediastinal tumour includes thymic epithelial tumours, germ cell tumours and malignant lymphomas.1 T-cell lymphoblastic lymphoma accounts for approximately 2% of non-Hodgkin’s lymphomas in adults and commonly associated with pleural effusion.2 Tissue biopsy may be required due to insufficient sensitivity of cytology via thoracentesis.3

Video 1  A thoracoscopic view during a video-assisted thoracoscopic biopsy.

Learning points
► The differential diagnosis of anterior mediastinal tumour includes thymic epithelial tumours, germ cell tumours and malignant lymphomas.
► T-cell lymphoblastic lymphoma accounts for approximately 2% of non-Hodgkin’s lymphomas in adults and commonly associated with pleural effusion.
► A video-assisted thoracoscopic biopsy for T-cell lymphoblastic lymphoma may be required due to insufficient sensitivity of cytology via thoracentesis.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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