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IMAGING IN THORACIC CANCER

Huge mediastinal germ cell tumor with "white-out" chest X-ray imaging of the left lung

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A 21-year-old man was brought to our hospital via ambulance because he could not move at all as a result of severe dyspnea. Chest X-ray showed diffuse consolidation with "white-out" of the whole left lung and a shift of the mediastinum toward the right (Fig 1). Chest contrast enhanced computed tomography (CT) showed an irregularly enhanced huge mass in the left thorax and there was no air component in the left lung (Fig 2).

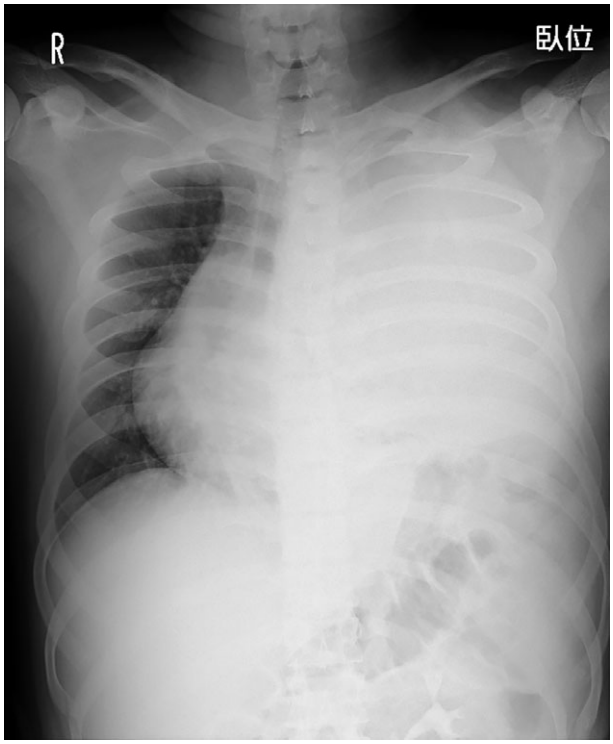

Figure 1 Chest X-ray shows diffuse consolidation of the whole left lung.

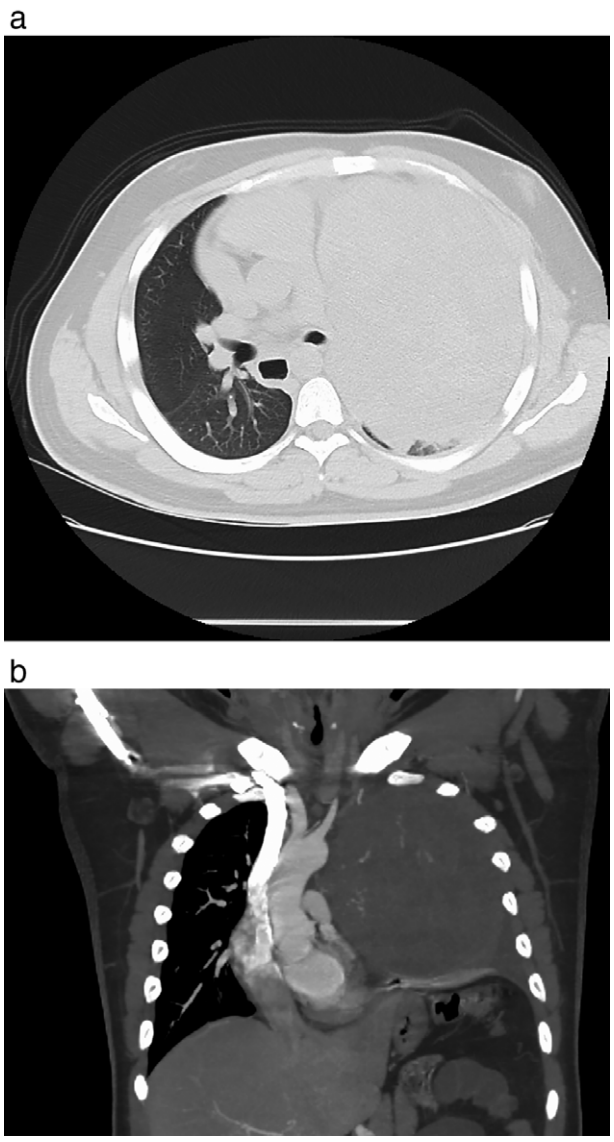

Figure 2 (**a**) Axial and (**b**) coronal views of chest contrast enhanced computed tomography image of the huge mass in the left thorax.

Keywords
Alpha-fetoprotein; lung invasion; mediastinal germ cell tumor

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We suspected that the mass was a mediastinal tumor and performed laboratory examinations, including tumor markers. The serum alpha-fetoprotein level was markedly elevated (12 325 ng/mL); therefore we performed an emergency parasternal tumor biopsy and made a diagnosis of non-seminomatous germ cell tumor (NSGCT). We administered chemotherapy followed by complete mediastinal tumor resection with left pneumonectomy using the hemiclamshell approach.

Histopathologic analysis revealed that the tumor was a mixed GCT that infiltrated the whole left lung arising from the anterior mediastinum. The patient underwent adjuvant chemotherapy on an outpatient basis.

Mediastinal NSGCT is a relatively rare malignancy that mainly occurs in young men.[1–4] Because mediastinal NSGCT tends to grow rapidly and directly invades other organs, it is classified as a poor-risk GCT.[5] In our case, because the anterior mediastinal tumor invaded the left lung and the majority was located in the left lung, chest X-ray showed "white-out" of the left lung. If white-out of hemithorax is observed on the chest X-ray of a young non-immunocompromised patient, a mediastinal tumor compressing the central airways should be considered, indicating a differential diagnosis of mediastinal GCT or sarcoma.

Disclosure

No authors report any conflict of interest.

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