Tyrosine Kinase Inhibitor–associated Fibrothorax

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Figure 1. (A) Computed tomography scan of the chest demonstrating a left-side pleural effusion with pleural thickening (white arrows). (B) Left side pleural thickening on chest X-ray (white arrow). (C) Thick pleura after pleurectomy.

A 59-year-old man with chronic myelogenous leukemia, refractory to imatinib, developed recurrent bilateral chylothoraces 3 months after initiating dasatinib. Treatment was briefly held and later reinitiated with a dose reduction. Response was adequate, but chylothoraces continued to recur at a slower pace. Given the disease response to dasatinib, bilateral tunneled pleural catheters were placed and removed once pleurodesis was achieved 2 months later.

Two years later, the patient presented with complaints of moderate dyspnea with exertion. Diagnostic images of the chest demonstrated a small left pleural effusion and thickening of both visceral and parietal pleurae (arrows, Figures 1A and 1B). Spirometry revealed moderate restriction. On performing a left-side thoracentesis, the opening pleural pressure was -6 cm H₂O and decreased to -34 cm H₂O after draining only 150 ml of chylous fluid, suggesting a trapped lung. Because of respiratory limitations affecting the patient's quality of life, a left pleurectomy was performed, revealing a diffusely thick firm fibrous pleura (Figure 1C).

Dasatinib, a tyrosine kinase inhibitor, is a standard and effective treatment for chronic myelogenous leukemia. Dasatinib is associated with pleural effusion, chylothorax, and fibrothorax (1–3). Although fibrothorax can be caused by multiple etiologies including infections, recurrent inflammation, and hemothorax, there is no other obvious alternative explanation in our case. ■

Author disclosures are available with the text of this article at www.atsjournals.org.

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This research is supported in part by the NIH through MD Anderson's Cancer Center Support Grant (CA016672).

Author Contributions: All authors provided conception and design, acquisition of radiological and pathological data, drafting of the article, critical revision of intellectual content, and final approval of the version to be published.

Am J Respir Crit Care Med Vol 199, Iss 11, p 1432, Jun 1, 2019

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Originally Published in Press as DOI: 10.1164/rccm.201806-1155IM on February 20, 2019

Internet address: www.atsjournals.org