Massive milky pleural effusion

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Accepted 23 February 2014

DESCRIPTION

A 53-year-old man with a history of non-Hodgkin's lymphoma (NHL) presented with worsening shortness of breath. He was diagnosed with bulky grade III follicular lymphoma 5 years ago and was in remission after receiving eight cycles of chemotherapy. The chest X-ray revealed a left-sided pleural effusion (figure 1A). During thoracentesis, chylous-appearing fluid was removed (figure 1B). The pleural fluid had chylomicrons, and a high triglyceride level confirmed the presence of a chylothorax. Computed axial tomography of the chest unveiled a large soft tissue mass surrounding the descending thoracic aorta as well as multiple mediastinal lymph nodes, leading to concerns about the recurrence of lymphoma (figure 1C,D). The patient underwent video-assisted thoracic surgery, and a lymph node biopsy showed follicular lymphoma. Small-to-medium sized lymphoid cells with irregular nuclear membranes are seen on H&E stain of the lymphoid mass (figure 1E). Immunohistochemistry showed expression of CD10, CD20, CD23 and B-cell lymphoma-2 consistent with B-cell follicular lymphoma (figure 1F). The bone marrow biopsy was normal. The patient continued to have reaccumulation of massive amounts of chylous fluid, requiring multiple thoracentesis. Thoracic duct ligation was

considered, but it was technically difficult in our patient, as the mass was encasing the thoracic duct. The patient was started on a medium chain triglyceride diet. Chemotherapy was initiated. Chylothorax is an uncommon and poorly described complication of NHL remission from NHL. Our case emphasises the presence of recurrent chylothorax in NHL and challenges in management.

Learning points

- ▶ Chylothorax is caused by disruption or obstruction of the thoracic duct or its tributaries as a result of lymphomatic infiltration or external compression by lymph nodes, resulting in reflux of chyle into the pleural space.¹
- ▶ The management involves treatment of the underlying lymphoma and supportive treatment for chylothorax with drainage.²
- ▶ In case of refractory chylothorax, pleurodesis or pleuroperitoneal shunting might be required to prevent reaccumulation.

Figure 1 (A) Chest X-ray showing massive left-sided pleural effusion. (B) Chylous fluid drained during thoracentesis. (C and D) Contrast-enhanced computed axial tomography (CAT) of the chest showing posterior mediastinal soft tissue mass encasing the descending aorta and massive left-sided pleural effusion. (E) H&E stain at $\times 40$: small-to-medium sized lymphoid cells with irregular nuclear membranes. (F) CD10 immunohistochemical stain, $\times 40$: the lymphoid cells are immunoreactive with CD10 immunostain, indicating a follicular centre cell origin.

To cite: Aju R, Chaubey VK.
BMJ Case Rep Published
 online: [please include Day
 Month Year] doi:10.1136/
 bcr-2013-203105

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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