

5-2019

Idiopathic Chylothorax: Is it a Benign or Malignant Diagnosis?

Sandra Naffouj
Henry Ford Health System

Jasmine-Yasmine Omar
Henry Ford Health System

Follow this and additional works at: <https://scholarlycommons.henryford.com/merf2019caserpt>

Recommended Citation

Naffouj, Sandra and Omar, Jasmine-Yasmine, "Idiopathic Chylothorax: Is it a Benign or Malignant Diagnosis?" (2019). *Case Reports*. 60.
<https://scholarlycommons.henryford.com/merf2019caserpt/60>

This Poster is brought to you for free and open access by the Medical Education Research Forum 2019 at Henry Ford Health System Scholarly Commons. It has been accepted for inclusion in Case Reports by an authorized administrator of Henry Ford Health System Scholarly Commons. For more information, please contact acabrer4@hfs.org.



Idiopathic Chylothorax; is it a benign or malignant diagnosis?

Sandra Naffouj, MD; Jasmine Omar, MD
Henry Ford Health System / Wayne State University
Detroit, Michigan



Background

- Chylothorax is the presence of chyle in the pleural space with a triglyceride (TG) level >110 mg/dl or evidence of chylomicrons in the pleural fluid.
- The main etiologies for chylothorax are traumatic (thoracic surgery) and non-traumatic (malignancy).

Case Presentation

- 29-year-old healthy male presenting with acute onset of dyspnea and right-sided pleuritic chest pain.
- CT chest showed large right-sided pleural effusion. Thoracentesis was performed, draining 2 liters of turbid white pleural fluid; a chest tube was placed.
- Pleural fluid analysis: exudative effusion with lymphocytic predominance and TG of 1,100 mg/dl. Cytology and cultures negative for malignancy and infection.
- Patient was made NPO; TPN and IV Octreotide were started. Lymphangiogram showed chyle leak from the thoracic duct (TD) at the level of T7-T8. He underwent embolization, however high-volume chyle leakage was persistent.
- Patient underwent video assisted thoracoscopy (VATs) and TD ligation. Output downtrend, pleural effusion resolved, and chest tube was removed. Diet was advanced to low-fat, medium chain triglyceride (MCT) diet.
- No leak recurrence at 1-month follow-up.

Case Presentation

- Pleural biopsy was negative for malignancy. Serum LDH, AFP, B-hCG, HIV, AFB, fungal, and anaerobic cultures were all negative. Peripheral blood smear was negative for dysplasia and blasts. Full body CT did not show any evidence of malignancy.

Images

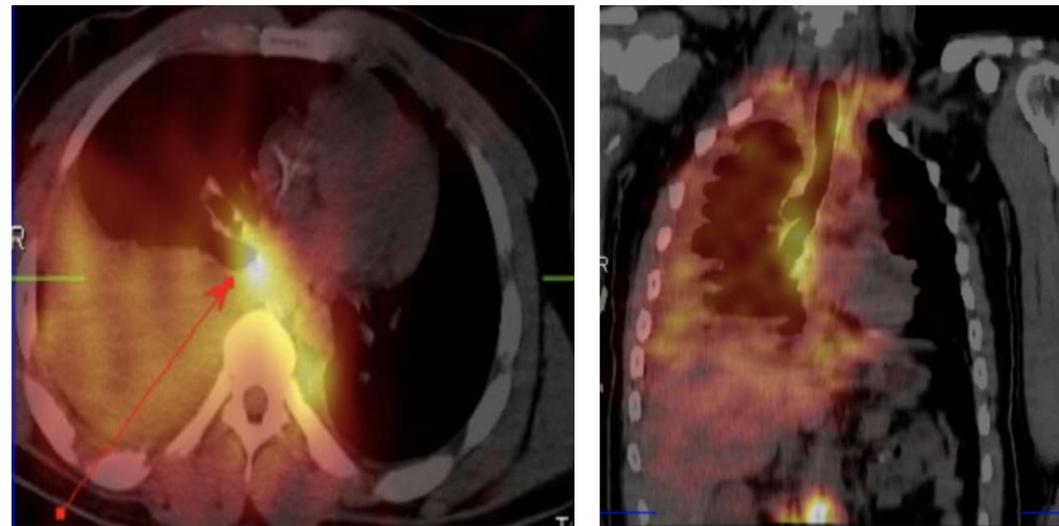


Figure 1 (A,B): Lymphatic scan demonstrating TD leak



Figure 2:
Lymphangiography
Abdomen/Pelvis
with embolization

Discussion

- An evaluation of the most common causes of non-traumatic chylothorax include:
 - Malignancy (lymphomas, lung and mediastinal cancers)
 - Infections (tuberculosis, fungal infections)
 - Congenital disorders of the lymphatic system
- Conservative management includes:
 - Nothing by mouth or a low-fat diet with MCTs
 - TPN to replace protein and electrolytes, and deliver lipids directly into the bloodstream, thereby bypassing the lymphatic system and decreasing chyle flow.
 - Octreotide is an adjunct to help reduce chyle absorption from the intestines.
- Possible interventional modalities include:
 - TD embolization
 - TD ligation
 - Pleurodesis
- A combination of conservative and operative interventions was performed in our case given high-output of chyle and absence of a clear etiology.
- It is crucial to perform a comprehensive assessment in non-traumatic chylothorax to exclude occult underlying etiology.

References

1. Rajdev K, et al. A Case of Transudative Chylothorax: A Diagnostic Dilemma. *Cureus* 2018.10(2), e2247. doi:10.7759/cureus.2247
2. Doerr CH, et al. Etiology of chylothorax in 203 patients. *Mayo Clin Proc* 2005; 80:867.
3. Maldonado F, et al. Medical and surgical management of chylothorax and associated outcomes. *Am J Med Sci*. 2010 Apr;339(4):314-8. doi: 10.1097/MAJ.0b013e3181cdcd6c