A 57-Year-Old Female with Rare Presentation of Multiple Thoracic Duct Cysts

Seth J. Bleicher D.O. PGY-II and Mohammad M. Masri M.D.
Department Chair of General Surgery at Larkin Community Hospital

Introduction
Cases of a single thoracic duct cyst are reported since Emerson's case involving a young female who presented with repeated episodes of substernal pain, exerional dyspnea, and a non-productive cough. The origin of cysts in the lateral section of the head and neck have numerous origins, including abscesses, branchial cysts, and cystic metastasis from cancer. In the neck region, congenital cysts that is diagnosed during infancy is commonly related to lymphatic malformation. Cystic dilatation of the cervical part of the thoracic duct is an uncommon condition most likely as a result of localized weakness in the vessel wall in combination with fluid obstruction.

A case recently discovered during surgery demonstrates this rare condition, with multiple instead of solitary. In the operation, multiple cysts in the thoracic wall was discovered. Cases have been published regarding solitary thoracic duct cysts, however, none have encountered multiple cysts found during clinical examination, radiological studies, and visual inspection during surgery.

Solitary thoracic duct cysts in the mediastinum are rare, but multiple had yet to been discovered.

Case Presentation
A 57-year-old African-American female presented with a mass on the left supraclavicular area with radiating pain in the left upper extremity. A spiral CT of the neck without contrast demonstrated no cervical mass or lymphadenopathy. However, physical examination revealed a palpable, fluctuant, and mobile mass when pressing inferior on the left supraclavicular space about 2 centimeters lateral to the neck. Radiology was consulted to perform and then analyze the ultrasound-guided fine needle aspiration of the left cystic mass. With a 22-gauge needle, straw-colored fluid was aspirated and sent to pathology.

During the operative exploration, multiple cysts were identified along the thoracic wall after penetrating through the left mediastinum. The largest of cyst was most cephalad posterior to the left clavicle about 2 centimeters lateral to the neck. Numerous and smaller cysts were identified by visual inspection.

Because multiple cysts were discovered, only one cyst was removed to prevent possible respiratory complications such as acute respiratory distress, tension pneumothorax, and atelectasis. This patient had left upper extremity discomfort, thus a conservative approach to relieve symptoms is most practical.

Discussion
Cases have been published regarding solitary thoracic duct cysts, however, none have ever encountered multiple cysts until the incidental finding on surgical exploration. Findings on the ultrasound provide evidence of its existence.

Pathology Images - Consisting of a Collapsed Cyst; 2 x 1 cm

(Left) The wall of the cyst was edematous and focally contained sparse lymphocytes
(Right) The cyst was lined by a flattened attenuated epithelium

Pathology Slides Courtesy of Dr. Clara Milikowski MD, Associate Professor of Pathology
At the Miller School of Medicine Department of Pathology at University of Miami,
In Miami, Florida

References