Silencing the bird: Should surgical thoracic duct ligation shuffle off this mortal coil?

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Disclosures: Authors have nothing to disclose with regard to commercial support.

Received for publication March 17, 2018; accepted for publication March 21, 2018; available ahead of print April 14, 2018.

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J Thorac Cardiovasc Surg 2018;156:844

0022-5223/\$36.00

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<https://doi.org/10.1016/j.jtcvs.2018.03.072>

Chylorthorax after esophagectomy. Pre-TDE (left) and post-TDE (right).

Central Message

Drs Nadolski and Itkin describe a successful series of TDE. One drawback is that the procedure difficulty may limit its widespread application.

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Chylorthorax is a feared complication after many cardiothoracic operations and one that occurs in 4% of patients after esophagectomy and 1.4% of patients after lobectomy with mediastinal lymph node dissection.¹⁻³ Fortunately, 38% to 90% of chylorthorax will close spontaneously with dietary or medical management. However, if such measures fail, a patient may be subject to reoperation and attempted ligation of the thoracic duct. This can be challenging because it is often difficult to identify the thoracic duct, let alone the location of the leak. Despite the difficulty, the literature reports that the success of postoperative thoracic duct ligation (TDL) is between 70% and 100%.^{3,4} Those who have persistent chylorthorax despite attempted TDL face malnutrition and further invasive management.

Thoracic duct embolization (TDE) was first described approximately 20 years ago. The initial experience showed this technique was feasible with a 45% success rate.⁵ Given the technical success with minimal complications, the authors suggested that TDE should be the first-line treatment for chylorthorax. Despite their excellent results, it is not clear whether this procedure should replace traditional TDL and adjunct procedures such as pleurodesis and decortication.

In this issue of the *Journal*, Nadolski and Itkin⁶ describe the early outcomes of lymphangiography and TDE after failed TDL. They describe 50 patients who were referred for TDE after surgical TDL. The cause of the initial chylorthorax was surgical in 78% of patients, including esophagectomy, lung resection, aortic surgery, and neck dissection. The other 22% of patients had spontaneous chylorthorax of differing causes. Astonishingly, 60% of TDL failures were due to completely missing the thoracic duct. Nadolski and Itkin⁶ demonstrated well that TDE resulted in resolution of chyle leaks in 90% of all cases and 92% of the postsurgical cases. The most common and successful

method of embolization used coils and glue. There were no major complications or deaths associated with TDE. Their accompanying video demonstrates well what appears to be a technically demanding procedure. Although it is encouraging to know that among experienced operators, this procedure can address a chyle leak within 7 days in the majority of patients, it remains to be determined whether such outstanding results can be reproduced at other centers with the requisite interventional radiology expertise.

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