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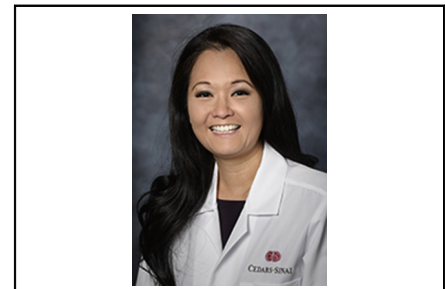


Commentary: Management of chyloptysis: What tools are in your toolbox?

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Chyloptysis is a rare clinical entity, presenting with diagnostic perplexity and challenges in treatment. It has been described in only a few case reports in the literature and is associated with lymphatic agenesis and malformations, lymphangiomatosis, yellow nail syndrome, Behçet disease, radiation, malignancy, and trauma.¹⁻⁴ Although a variety of sputum analyses have been reported to confirm the diagnosis of chyloptysis, lymphangiography is regarded as the recommended diagnostic test.⁵ Multiple mechanisms have been proposed to explain the introduction of chyle into the airways. In the setting of trauma, chyloptysis may be due to disruption of the thoracic duct or mediastinal lymphatics with subsequent development of a broncholympathic fistula. It often presents soon after the inciting traumatic event; however, in the case report by Mitchell and colleagues,⁶ they describe a delayed presentation in a patient who sustained a left flank stab wound more than a decade before the onset of chyloptysis. In addition to their comprehensive clinical review, they detail their successful management of chyloptysis by using a right thoracoscopic approach for thoracic duct ligation.

Similar to other published case reports on chyloptysis, perhaps the most impactful value of the report by Mitchell and colleagues⁶ is the knowledge-sharing of different strategies used to treat this challenging and rare clinical entity. Initial strategies often implement a trial of



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CENTRAL MESSAGE

The pivotal decision in choosing thoracic duct ligation or embolization for the treatment of chyloptysis is often based on the availability and offering of these procedures at one's institution.

conservative management with a low-fat or medium-chain triglyceride diet, sometimes with an octreotide adjunct to further reduce lymphatic flow. Patients who have persistent chyloptysis despite diet modifications are then recommended to undergo either surgical or percutaneous management. Surgical management primarily consists of thoracic duct ligation with an open or thoracoscopic approach and has success rates ranging from 67% to 100%.⁷ Alternatively, the thoracic duct can be visualized with lymphangiography and percutaneously embolized with coils, liquid embolic agents, or a combination of both.⁵ Reported success rates of embolization range from 71% to 73.5%.⁸

Whether one approach to treatment is preferred or superior has yet to be determined. Surgical thoracic duct ligation is highly successful, as it directly stops lymphatic flow; however, it necessitates a period of postoperative recovery. Although thoracoscopic approaches have become more common, allowing for quicker recovery, the procedure is still associated with risks of operative and anesthesia morbidity.^{2,7} Embolization, with comparative success rates, has lower risks due to the ability of performing the procedure under local anesthetic and sedation, therefore avoiding general anesthesia and single-lung ventilation. However, the success rates of embolization are determined by the

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Disclosures: The author reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

Received for publication July 27, 2021; revisions received July 27, 2021; accepted for publication July 30, 2021; available ahead of print Aug 5, 2021.

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JTCVS Techniques 2021;9:183-4
2666-2507

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<https://doi.org/10.1016/j.jtc.2021.07.025>

ability to visualize the cisterna chyli or the thoracic duct and catheterize it, which are dependent on the body habitus of the patient and operator experience.

Despite head-to-head comparisons and weighing the pros and cons of each procedure, in most institutions, the pivotal decision of how to treat chyloptysis is not based on clinical data or patient selection but often driven by the availability of the procedure at one's institution. Since both treatments are not routine procedures, institutions may not have a surgeon on staff experienced in thoracoscopic thoracic duct ligation or an interventionalist facile in thoracic duct cannulation and embolization. Therefore, although it continues to be debated as to which treatment for chyloptysis is more successful, ultimately the final treatment decision will likely be determined by the resources or tools available or offered in your institution's toolbox.

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