

Answers to Medical Quiz

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- A.1.** Traumatic chylothorax.
- A.2.** Left lung collapse, left pleural effusion and sternotomy wires.
- A.3.** Feeding diet composed of medium-chain triglycerides.

DISCUSSION

Chylothorax is the accumulation of lymph in the pleural space because of leak from thoracic duct, usually on the right side¹. Chylothorax in pediatrics, is one of the most common complication after cardiothoracic surgery but may occur in newborns or conditions associated with abnormal lymphatics¹. An incidence of 0.89% to 6.6% after cardiac surgery in pediatric age groups has been reported².

The clinical presentation of chylothorax results from the accumulation of lymph in pleural space. Initially patients could be asymptomatic; however dyspnea, cough and chest discomfort develop with time. The severity of symptoms depends on the size of the effusion³⁻⁵. The onset of symptoms is usually gradual; however if there is a significant leakage of chyle, the child could present with significant respiratory distress. A history of recent cardiothoracic surgery or trauma may be relevant.

Diagnosis of chylothorax should be suspected when persistent drainage from an existing chest tube become cloudy during feeding or when similar milky fluid is found after placing a tube into a newly discovered effusion. Confirmation of diagnosis of chylothorax is based on biochemical analysis of the pleural fluid, which contains chylomicrons, high levels of triglycerides and lymphocytes^{6,7}. Radiological investigation depends on plain chest X-ray, while CT scan play no role in pediatric patient with chylothorax⁸.

Management consists of drainage, dietary modifications containing medium chain fatty acids and total parenteral nutrition⁹. Somatostatin and its analogue octreotide may be useful in some cases¹⁰. Most of the cases of chylothorax respond successfully to conservative treatment¹⁰.

Surgery should be considered for patients who fail conservative management. Surgical ligation of thoracic duct can be performed thoroscopically or through open technique¹¹. Other rare surgical therapeutic options include pleura-peritoneal shunts, or pleurodesis¹¹.

CONCLUSION

Most cases of chyle leak in children are caused by injury of the thoracic duct due to

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