Physician - Pediatric Cardiac and Vascular Surgery/Adult Congenital Heart Diseases

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Managing Recurrent Chylothorax Post Pediatric Cardiac Surgery

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Recurrent chylothorax following pediatric cardiac surgery poses significant management challenges. Chylothorax may result from direct trauma to lymphatic vessels, or as a complication of central venous hypertension post cardiac surgery, leading to severe complications such as malnutrition, delayed wound healing, infections, and prolonged hospital stays. Initial management includes pleural fluid drainage, dietary modifications or total parenteral nutrition, and pharmacotherapy with octreotide. Surgical options, such as thoracic duct ligation, are considered for refractory cases. Typically, thoracic duct ligation via the right chest is recommended regardless of the chylothorax side, though it may not always be effective. This case report demonstrated the complexities and tailored strategies required to optimize outcomes in such cases. A five-year-old female patient with tricuspid atresia and a large ventricular septal defect, previously treated with pulmonary artery banding, who developed recurrent chylothorax following a cavopulmonary anastomosis, was admitted. Despite initial interventions such as octreotide therapy and total parenteral nutrition, the chylothorax persisted, leading to escalated treatment. Initial right-sided thoracic duct ligation via thoracoscopy did not resolve the chylothorax. Two weeks later, left-sided duct ligation via thoracotomy was performed, which successfully treated the chylothorax. This case emphasizes that lateralization of thoracic duct ligation should be considered based on the side of the chylothorax, challenging the conventional approach of right-sided ligation. Managing recurrent chylothorax requires a systematic and sometimes unconventional approach. This case highlights the need for flexibility in surgical planning and suggests that lateralization of the duct ligation may be more effective in certain scenarios.

Keywords: Chylothorax, congenital heart disease, thoracic duct.

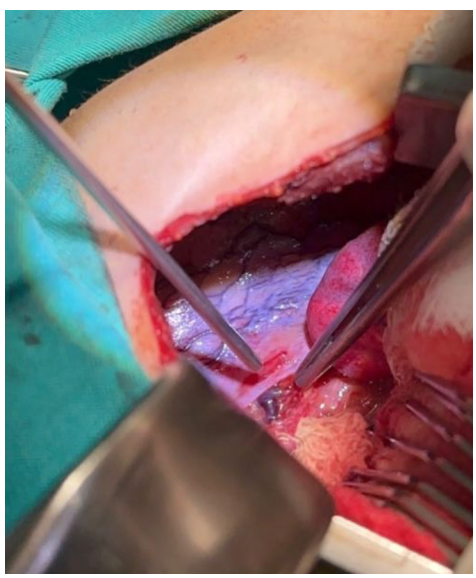

Figure 1. Intraoperative findings.

Figure 2. Chest drain reservoir containing the chyle.

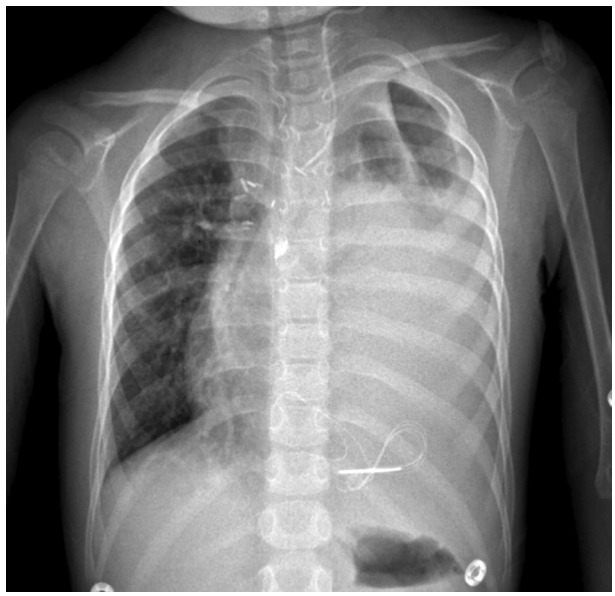

Figure 3. Chest radiograph demonstrating pleural effusion (chylothorax).

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