

EDITORIAL

Chylothorax in infants and children in China, a very good start

As we expected, this issue of the journal published an original article on causes and clinical manifestations of chylothorax in children in China,¹ which provides data from a large children's hospital covering 107 cases with chylothorax seen during the recent 10 years. The authors found that nearly 60% of the cases had primary chylothorax (PC) or neonatal chylothorax (NC) and about 40% had chylothorax secondary to surgeries (SC). Another important finding is that the conservative treatment of the patients with chylothorax resulted in pretty good clinical outcomes. This is an extremely good and applaudable start of the expected comprehensive studies on this previously less emphasized disease entity.

The purposes of studies on diseases are ultimately to effectively treat or cure and prevent diseases. Therefore, the further studies on chylothorax and many other diseases should try to clarify or identify the possible particular causes of the diseases. For example, we may try to understand what factors might be related to occurrence of PC or NC. Do genetic factors play some role? Injuries occurred during the labor, during the pregnancy of the mothers, or infections occurred during these periods might be the causes. To identify any particular causes, we always need to do further studies. For injuries, we need to collect relevant data, such as those concerning the history of possible injury, when, where, and how the injury occurred, relevant physical, imaging and laboratory examinations, etc. For infection, we need to analyze data including symptoms and signs, laboratory and other related examinations, esp. antigens, antibodies and nucleic acid determination and so on.

On the other hand, it is quite clear that in the cases with SC, the chylothorax occurred mostly after cardiac surgery. However, is it possible to clarify which procedures or which stage of the surgery might be closely correlated with the SC? To answer these questions, we may need to collaborate with the cardiac surgeons to explore the possible causes, and to find out measures to prevent occurrence of chylothorax. There are some preliminary

reports on how to prevent postoperative chylothorax in adults undergoing esophagectomy by applying magnetic resonance thoracic ductography (MRTD),² such technique may possibly be applied for prevention of SC after pediatric cardiac surgery. Another possible approach for prevention of SC is selective en masse ligation of the thoracic duct which was also demonstrated to be effective and safe in adult esophagectomy.³ Although esophageal cancer is extremely rare among pediatric population, in a cohort of adults who underwent minimally invasive esophagectomy performed via thoracoscopy, a very simple method was confirmed to be significantly effective and safe for prevention of postoperative chylothorax, this method should immediately be considered by pediatric cardiac surgeons for application.⁴

Currently there are no standard therapeutic approaches to chylothorax. The efficacy and safety of none of the diverse treatments have been demonstrated through randomized controlled clinical trials. As the authors pointed out, in order to achieve evidence-based treatment for chylothorax in children, we will need to carry out prospective, multicenter large-scale clinical trials. It is also important to have multi-disciplinary collaboration and share clinical experiences.

Getu Zhaori, Editor-in-Chief
Editorial Office, *Pediatric Investigation*, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Beijing, China

Correspondence

Getu Zhaori, Editorial Office, *Pediatric Investigation*, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health, Beijing, China.
Email: zhaorigetu@pediatricinvestigation.org

CONFLICT OF INTEREST

I have no conflicts of interest to declare regarding this manuscript.

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