Dear Editor,

Bellini et al. [1] raise concerns regarding the timetable of the management algorithm of congenital chylothorax (CCT) of the newborn recently published in the Journal [2]. Additionally, the authors alert about nonreversible measures including pleurodesis and ligation of the thoracic duct. Furthermore, they discuss what is causal associated with CCT and what is a consequence of CCT.

Before going into detail, I want to annotate that we were only collecting and analyzing cases with CCT diagnosed at least within the first 28 days of life and not any form of chylothorax related to surgery or injury of any other reason [2]. Prenatal intervention improved perinatal condition and postnatal outcome of CCT in infants <35 weeks of gestational age; thus, our recommendation was that in experienced centers prenatal interventions including pleurodesis might be justified [3, 4].

Most cases of CCT have quite variable courses of disease. Especially, those with high-output pleural fluid losses of more than 100 mL per day struggling on the ventilator with need for pleural drainages and total parenteral nutrition are at high risk for infectious and metabolic complications. This group of infants consists of a majority of preterm born neonates. Thus, too long conservative management of CCT might be harmful and might increase the risk of death. Mortality rates are reported to be as high as 30–70% [2, 5].

At the same time of publication of our systematic analysis of cases between 1990 and 2018, Rocha et al. [6] published a comparable review including algorithms for both congenital and posttraumatic chylothorax. They state that in case of no response after 1 week of conservative treatment and drainage >10 mL/kg/day or persistent drainage of large volumes (>100 mL per day), for a period of 5 consecutive days or severe metabolic and nutritional complications, which are difficult to control, an invasive approach is recommended. This might include thoracic duct ligation, pleural abrasion, pleurodesis, thoracic duct embolization, pleuro-peritoneal shunts, or diaphragmatic fenestration. Thereafter, conservative measures should be gradually reduced provided surgical treatment was successful. Progression in the invasiveness of treatment options is determined by the response to previous treatments [4]. Al-Tawil et al. [7] also recommend that surgery should be considered if conservative management of CCT fails after 4–5 weeks. Another recent review advises in case of severe and long-lasting CCT surgical intervention involving unilateral or bilateral pleurectomy and
thoracic duct ligation, with or without pleurodesis [8]. The authors state that early identification and successful treatment are warranted by a timely cross-disciplinary approach to care. Hence, we feel that our recommendation regarding the time point of surgical interventions is realistic and correct in the context of a potentially life-threatening disease.

We collected all entities of diagnoses being associated with CCT irrespective of being causal or a consequence. In addition, the authors correctly state that BPD is a consequence of long-term mechanical ventilation in a preterm infant with complicated CCT and not a direct consequence of CCT [1].

There is limited experience with lymphatic studies in neonates, and lymphatic investigations are not available universally [5]. Interestingly, the group of Bellini et al. [1] is the only one experienced in lymphatic studies in CCT of the neonate. In conclusion, we feel that our systematic analyses of all newborn with CCT lead to a stringent timetable with an algorithm quite helpful for the clinician faced with this rare condition.

Conflict of Interest Statement

The author has no conflicts of interest to declare.

Funding Sources

The author declares that there was no funding.

Author Contributions

Prof. Dr. Bernhard Resch wrote the manuscript without any other support as a reply to a letter from Bellini et al.

References

1 Bellini C, Boccardo F, Bellini T. Congenital chylothorax of the newborn. Respiration. 2022 May; 12:1–2.
2 Resch B, Sever Yildiz G, Reiterer F. Congenital chylothorax of the newborn: a systematic analysis of published cases between 1990 and 2018. Respiration. 2022; 101(1):84–96.
3 Lee CJ, Tsao PN, Chen CY, Hsieh WS, Liou JY, Chou HC. Prenatal therapy improves the survival of premature infants with congenital chylothorax. Pediatr Neonatol. 2016 Apr; 57(2):127–32.
4 Tanemura M, Nishikawa N, Kojima K, Suzuki Y, Suzumori K. A case of successful fetal therapy for congenital chylothorax by intrapleural injection of OK-432. Ultrasound Obstet Gynecol. 2001 Oct; 18(4):371–5.
5 Attar MA, Donn SM. Congenital chylothorax. Semin Fetal Neonatal Med. 2017 Aug; 22(4):234–9.
6 Rocha G, Arnet V, Soares P, Gomes AC, Costa S, Guerra P, et al. Chylothorax in the neonate- A stepwise approach algorithm. Pediatr Pulmonol. 2021 Oct; 56(10):3093–105.
7 Al-Tawil K, Ahmed G, Al-Hathal M, Al-Jarallah Y, Campbell N. Congenital chylothorax. Am J Perinatol. 2000; 17(3):121–6.
8 Jackson S, Jnah AJ. Chylothorax: a stepwise approach to diagnosis and treatment. Neonatal Netw. 2021 Nov 1; 40(6):386–92.