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### Neonatal hypoxia due to pulmonary artery thrombus

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**Title:** Neonatal hypoxia due to pulmonary artery thrombus

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**Background:** Pulmonary artery thrombus is rare and should be considered in neonates with refractory hypoxia.

**Case:** Preterm female neonate had persistent hypoxia after birth despite intubation, high-frequency oscillatory ventilation (FiO2 100%), and inhaled nitric oxide. Delivery was via c-section at 33 weeks 4 days for new onset hydrops and poor biophysical profile. Echocardiogram revealed echo brightness in the lumen of the left pulmonary artery (LPA) with no color flow (figure 1a), concerning for occlusive thrombus. Chest CT angiogram confirmed the diagnosis (figure 1b, c). Hematology was consulted and recommended systemic thrombolysis (tissue plasminogen activator, tPA) with concomitant anticoagulation (Bivalirudin). Imaging 24 hours after therapy revealed a mobile thrombus with antegrade flow through the LPA (figure 1d). After 48 hours, the LPA was patent with no obvious clots and tPA was stopped (figure 1e).

**Decision Making:** Treatment of thromboembolic events (TE) in neonates requires a multidisciplinary approach and consideration of multiple factors. This event was thought to be acute which led to her preterm delivery. This history and clinical picture made systemic thrombolysis suitable treatment.

**Conclusion:** Refractory hypoxia in neonates without cyanotic congenital heart disease requires consideration for other rare etiologies. This case highlights the rare case of neonatal pulmonary artery thrombus and the multidisciplinary approach necessary to treat TE in neonates.

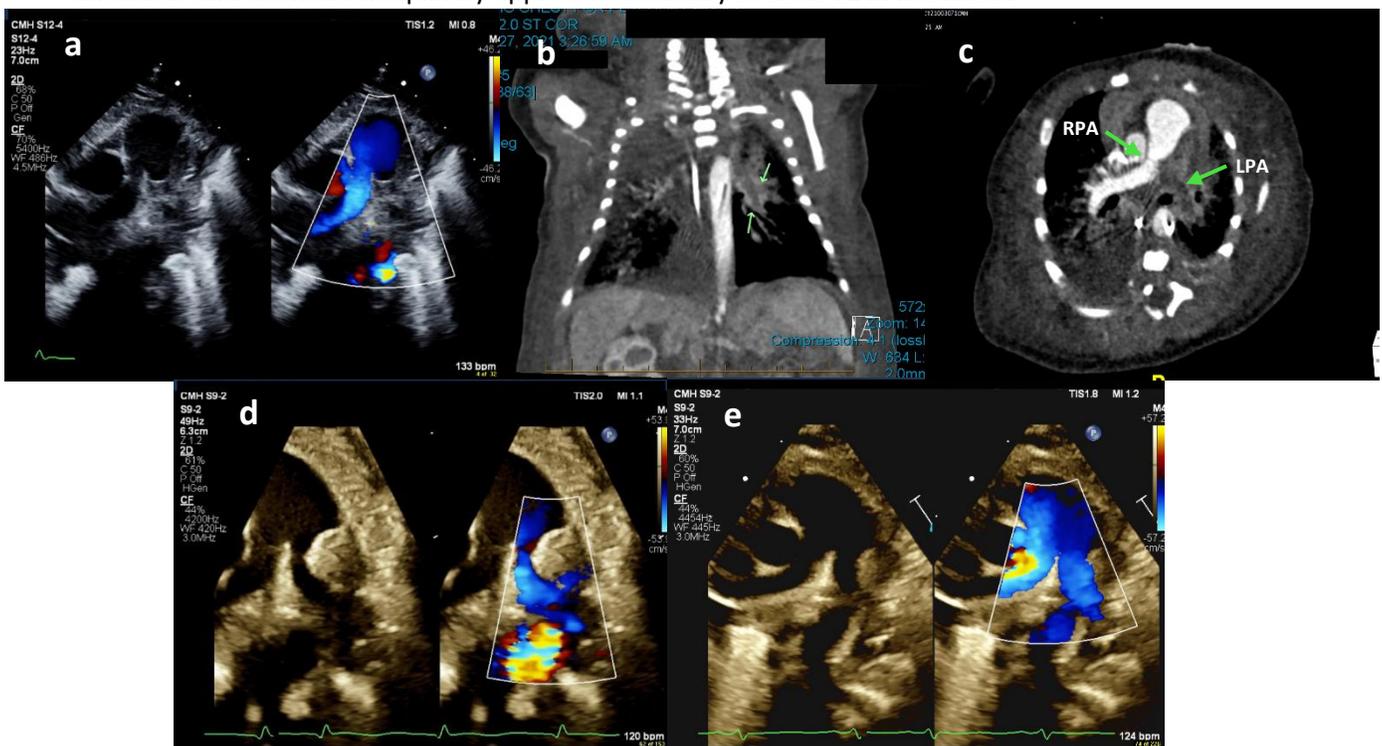


Figure 1. Echocardiographic and CT imaging

a. Parasternal short axis of pulmonary arteries showing brightness within LPA and no color flow. b. Coronal CT chest image showing thrombus within LPA. c. Axial CT image showing RPA with thrombus within LPA. d. Thrombus seen within LPA lumen with color flow after 24 hours of tPA. e. Bilateral pulmonary arteries seen with normal size and color flow after 48 hours of tPA.