Objective:
To describe the clinical and echocardiographic features and management of thiamine-responsive acute pulmonary hypertension (TRAPH). Design: Prospective observational study: January 2013 to November 2019.

Patients:
All exclusively breastfeeding infants with severe Pulmonary hypertension (PH) diagnosed by ECHO were recruited. Interventions: Intravenous thiamine 100 mg diluted in 10 mL of normal saline was given as an infusion over 1 hour, once a day for 3 days for all babies.

Main outcome measures:
Clinical resolution of heart failure and normalisation of PH by echocardiogram.

Results:
• A total of 250 infants had severe PH and 231 infants responded to thiamine.
• Clinical improvement with complete resolution of PH was noticed within 24–48 hours. PH completely resolved in 92% (231/250) after thiamine administration.
• Babies were followed up to a maximum of 60 months with no recurrence of PH.
• Echocardiogram showed reduction in chamber dimensions, resolution of TR and left-to-right shunting across PFO within 24 to 48 hours.

Key Message:
• Thiamine deficiency can present as acute pulmonary hypertension in exclusively breastfeeding infants. Thiamine administration based on clinical suspicion leads to remarkable recovery.

Conclusion:
Thiamine deficiency is still prevalent in selected parts of India. It can cause life-threatening PH in exclusively breastfeeding infants. Thiamine administration based on clinical suspicion leads to remarkable recovery.


"Thiamine Responsive Acute Pulmonary Hypertension (TRAPH) can be considered as differential in exclusively breast fed infants presenting as acute right heart failure”

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Thiamine Responsive Acute Pulmonary Hypertension


Reference

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National President 2020
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Pediatric Evidence And Research Learning Snippet

Thiamine Responsive Acute Pulmonary Hypertension