

Objective:

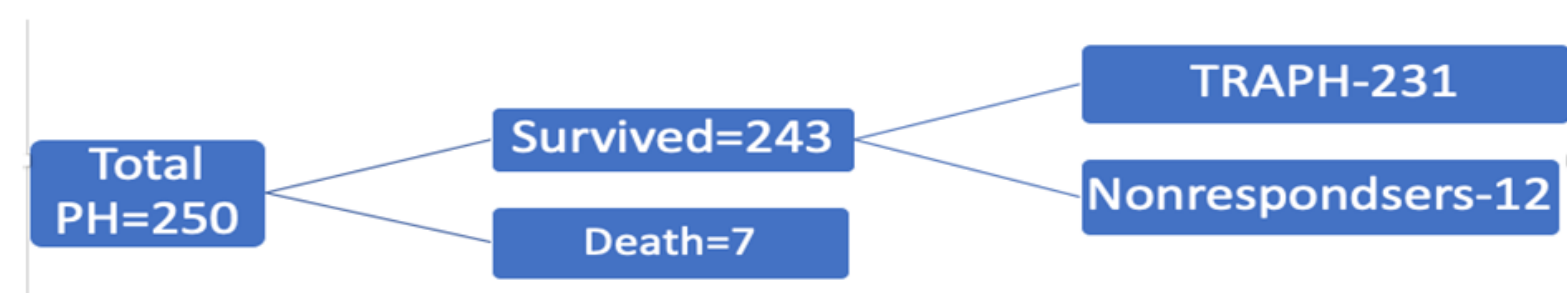
To describe the clinical and echocardiographic features and management of thiamine-responsive acute pulmonary hypertension (TRAPH). Design: Prospective observational study : January 2013 to November 2019.

Patients:

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

Main outcome measures:

Clinical resolution of heart failure and normalisation of PH by echocardiogram.



ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



Thiamine Responsive Acute Pulmonary Hypertension

Thiamine-responsive acute severe pulmonary hypertension in exclusively breastfeeding infants: a prospective observational study. Arch Dis Child 2020;0:1-6.

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.

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.

Key Message:

- Thiamine deficiency can present as acute pulmonary hypertension in exclusive breast feeding infants.
- The mean reduction in PASP from admission to discharge was 52.1mmHg (95%CI 50.2 to 53.9) (reduction of 71%) with p value of <0.01 following administration of Thiamine

EXPERT COMMENT



“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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Reference

Sastry UMK, M J, Kumar RK, et al. Thiamine-responsive acute severe pulmonary hypertension in exclusively breastfeeding infants: a prospective observational study. Archives of Disease in Childhood Published Online First: 03 September 2020. doi: 10.1136/archdischild-2019-318777