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Neonatal arch obstruction: Not always a coarctation

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Neonatal Arch Obstruction; Not Always a Coarctation

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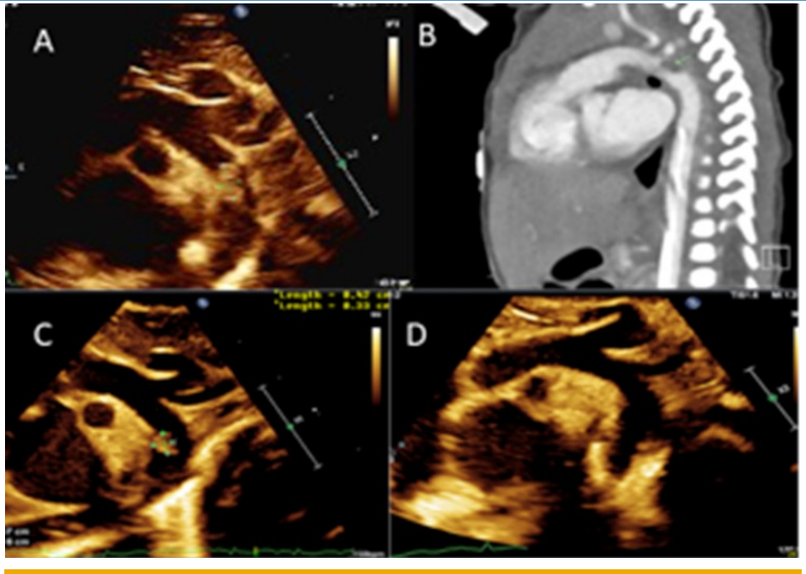
Introduction

- Spontaneous neonatal arch thrombosis is a rare, yet potentially lethal cause of aortic arch obstruction.

Case Presentation

- One-day-old male infant transferred to us due to failed CCHD screen, upper and lower blood pressure gradient of 20mmHg and echocardiographic concerns for aortic coarctation, on a prostaglandin infusion.
- Repeat echo revealed a large echogenic mass, 7.5x5mm, at the aortic isthmus and severe arch obstruction (Fig1A) with right to left systolic PDA flow.
- CT angiography confirmed presence of a large aortic arch thrombus (Fig1B).



Clinical Course

- Bivalirudin infusion was initiated without change in thrombus size.
- Systemic TPA was administered with significant reduction in thrombus size to 3x4mm (Fig1C) on day 1 and complete resolution on day 3 of TPA administration (Fig1D).
- PGE-1 infusion was discontinued, and patient was discharged home on daily aspirin.
- There was no recurrence of thrombus at 6-week follow up.
- Hypercoagulability work up was negative.

Discussion

- While coarctation of the aorta remains the most common cause of neonatal arch obstruction, early recognition of the rare event of spontaneous arch thrombosis prompted an adequate plan of medical management in the form of bivalirudin therapy followed by tPA infusion.

Conclusions

- This case highlights a rare yet critical cause of neonatal aortic obstruction due to spontaneous thrombosis.
- This also emphasizes the importance of precise diagnosis and aggressive medical intervention leading to excellent recovery outcomes.

Disclosures

The authors of this work have no disclosures.