Peripheral Vasoactive Administration in Critically Ill Children With Shock: A Single-Center Retrospective Cohort Study

Study Objective:
Characterize peripheral vasoactive administration, evaluate progression to central venous catheter placement, and describe complications associated with extravasation.

Patients who required CVC: 124 (53.7%)
Patients who did not require CVC: 107 (46.3%)

In PVA patients, 124 (53.7%) had a central catheter placed after a median of 140 mins (IQR, 65–247 min) of peripheral treatment.

PREVALENCE of EXTRAVASATION EVENTS:
Of the 231 children in whom vasoactive therapy was initiated peripherally, four experienced an extravasation event (1.7% [95% CI, 0.03–3.4%])

Extravasations occurred exclusively in the hand.

Twice w/ infusion of peripheral epinephrine.

Tribufuraline and topical nitroglycerine were prescribed as antidotes for any of the two epinephrine extravasation events.

Twice w/ infusion of peripheral dopamine.

Phentolamine was prescribed as an antidote for both peripheral dopamine extravasations.

Conclusion and Authors' Next Steps
Short-term administration of vasoactive therapy via a peripheral venous catheter is associated with a low prevalence of extravasation.

It is reasonable to consider this method of vasoactive infusion in a select population of pediatric patients.