Our aim was to determine the incidence of complications from the administration of vasopressors through peripheral venous catheters (PVC) in patients with circulatory shock, and to identify the factors associated with these complications" Medlej et al (2017).

Abstract:

BACKGROUND: The placement of a central venous catheter for the administration of vasopressors is still recommended and required by many institutions because of concern about complications associated with peripheral administration of vasopressors.

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OBJECTIVE: Our aim was to determine the incidence of complications from the administration of vasopressors through peripheral venous catheters (PVC) in patients with circulatory shock, and to identify the factors associated with these complications.

METHODS: This was a prospective, observational study conducted in the emergency department (ED) of a tertiary care medical center. Patients presenting to the ED with circulatory shock and in whom a vasopressor was started through a PVC were included. Research fellows examined the i.v. access site for complications twice daily during the period

of peripheral vasopressor administration, then daily up to 48 h after treatment discontinuation or until the patient expired.

RESULTS: Of the 55 patients that were recruited, 3 (5.45% overall, 6% of patients receiving norepinephrine) developed complications; none were major. Two developed local extravasation and one developed local thrombophlebitis. All three complications occurred during the vasopressor infusion, none in the 48 h after discontinuation, and none required any medical or surgical intervention. Two of the three complications occurred in the hand, and all occurred in patients receiving norepinephrine and with 20-gauge catheters.

CONCLUSIONS: The incidence of complications from the administration of vasopressors through a PVC is small and did not result in significant morbidity in this study. Larger prospective studies are needed to better determine the factors that are associated with these complications, and identify patients in whom this practice is safe.

Reference:

Medlej, K., Kazzi, A.A., El Hajj Chehade, A., Saad Eldine, M., Chami, A., Bachir, R., Zebian, D. and Abou Dagher, G. (2017) Complications from Administration of Vasopressors Through Peripheral Venous Catheters: An Observational Study. The Journal of Emergency Medicine. October 27th. .

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