



In the current database analysis, no significant association was found between the use of peripheral intravenous norepinephrine infusions and adverse events” Pancaro et al (2019).

Abstract:

BACKGROUND: Continuous infusions of norepinephrine to treat perioperative hypotension are typically administered through a central venous line rather than a peripheral venous catheter to avoid the risk of localized tissue necrosis in case of drug extravasation. There is limited literature to estimate the risk of skin necrosis when peripheral norepinephrine is used to counteract anesthesia-associated hypotension in elective surgical cases. This study aimed to estimate the rate of occurrence of drug-related adverse effects, including skin necrosis requiring surgical management when norepinephrine peripheral extravasation occurs.

METHODS: This retrospective cohort study used the perioperative databases of the University Hospitals in Amsterdam and Utrecht, the Netherlands, to identify surgical patients who received norepinephrine peripheral intravenous infusions (20 µg/mL) between 2012 and 2016. The risk of drug-related adverse effects, including skin necrosis, was estimated. Particular care was taken to identify patients who needed plastic surgical or medical attention secondary to extravasation of dilute, peripheral norepinephrine.

RESULTS: A total of 14,385 patients who received norepinephrine peripheral continuous infusions were identified. Drug extravasation was observed in 5 patients (5/14,385 =

0.035%). The 95% confidence interval (CI) for infusion extravasation was 0.011%-0.081%, indicating an estimated risk of 1-8 events per every 10,000 patients. There were zero related complications requiring surgical or medical intervention, resulting in a 95% CI of 0%-0.021% and indicating a risk of approximately 0-2 events per 10,000 patients.

CONCLUSIONS: In the current database analysis, no significant association was found between the use of peripheral intravenous norepinephrine infusions and adverse events.

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Reference:

Pancaró, C., Shah, N., Pasma, W., Saager, L., Cassidy, R., van Klei, W., Kooij, F., Vittali, D., Hollmann, M.W., Kheterpal, S. and Lirk, P. (2019) Risk of Major Complications After Perioperative Norepinephrine Infusion Through Peripheral Intravenous Lines in a Multicenter Study. *Anesthesia and Analgesia*. September 27th. doi: 10.1213/ANE.0000000000004445. .

