



Symmetrical peripheral gangrene (SPG) is an uncommon syndrome showing symmetrical gangrene in acral regions without evidence of large-vessel occlusion or vasculitis. Intravenous vasopressors are frequently used to manage hemodynamically unstable patients. There have been few reports about SPG after using inotropics” Kwon et al (2018).

Abstract:

BACKGROUND: Symmetrical peripheral gangrene (SPG) is an uncommon syndrome showing symmetrical gangrene in acral regions without evidence of large-vessel occlusion or vasculitis. Intravenous vasopressors are frequently used to manage hemodynamically unstable patients. There have been few reports about SPG after using inotropics. However, risk factors for SPG have not been extensively studied. Therefore, the objective of this study was to analyze several cases of SPG and identify risk factors for SPG.

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METHODS: From October 2013 to October 2016, 36 patients with SPG after using vasopressors were included in this study. SPG is an extremely rare disease entity. Therefore,

this work was designed as a matched case-control study. For the control group, 42 patients (25 men and 17 women) with similar age, admission department, sex, and vasopressor usage in intensive care unit patients during the same period were selected. Retrospective chart review was performed to identify risk factors within the following categories: medical conditions, vasopressor-related factors, and Sequential Organ Failure Assessment scores.

RESULTS: Differences between the 2 groups concerning medical condition-related variables did not exist. Statistically significant differences were found in intensive care unit duration ($P = 0.0011$) and survival. All vasopressor-related factors were adjusted according to weights of patients. Weight-compensated mean dose of dopamin significantly ($P = 0.028$) affected the occurrence of SPG. Weight-compensated peak dose of norpin, dopamin, and epinephrine also significantly contributed to SPG.

CONCLUSIONS: Symmetrical peripheral gangrene is a rare clinical syndrome related with a high mortality and up to 70% of patients who survive require amputation. Several studies have mentioned that there are several factors affecting the result of SPG. Few studies on SPG have been reported and most of them are case reports. In this study, we revealed the influence of vasopressors to the occurrence of SPG, and this was the first matched case-control study based on the analysis of multiple risk factors.

Reference:

Kwon, J.W., Hong, M.K. and Park, B.Y. (2018) Risk Factors of Vasopressor-Induced Symmetrical Peripheral Gangrene. *Annals of Plastic Surgery*. January 9th. .

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