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Effects of ambulation and nondependent transfers on vital signs in patients receiving norepinephrine**Rosario Arcaya Nievera, Ann Fick and Hilary K Harris**
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Background: Norepinephrine is a peripheral vasoconstrictor administered for acute hypotension. Norepinephrine is quick acting and increases arterial BP with little effects on HR or cardiac output. During activity, blood flows to the periphery to supply muscles with oxygen which may oppose norepinephrine vasoconstriction. Questions exist regarding the safety of mobilizing patients receiving norepinephrine.

Purpose: To assess the safety of mobility in patients receiving low dose norepinephrine (0.05 µg /kg/min) by examining mean arterial pressure (MAP) and heart rate (HR) before and after activity with parameters set by the physician.

Methods: A retrospective chart review of physical therapy (PT) intervention of 47 patients during the first patient transfer to chair or ambulation with norepinephrine infusing. Data including HR, MAP, norepinephrine dose and activity performed were extracted. Paired t-tests compared MAP and HR pre and post PT. A Kruskal-Wallis H test was conducted to evaluate differences among norepinephrine doses and physical activity levels.

Results: 41 and 47 patients (87%) tolerated the activity within safe vital sign ranges as recommended per their physician. The change in patients' MAP from pre to post activity was not statistically significant ($p=0.160$), while a significant increase in HR occurred after activity ($p<0.001$). A Kruskal-Wallis H test showed no significant difference in the norepinephrine dose and activity level ($\chi^2=6.34$, $p=0.17$). There were no instances of cardiopulmonary or respiratory arrest during any PT sessions.

Conclusion: The results of this study offer preliminary support of the safety of mobilizing patients receiving low dose norepinephrine.

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