Bolus-dose phenylephrine (BDPE) is routinely used to treat hypotension in the operating room. BDPE’s fast onset of action and ability to be administered peripherally have prompted calls for its use in the Emergency Department (ED)” Swenson et al (2018).

Abstract:

Introduction: Bolus-dose phenylephrine (BDPE) is routinely used to treat hypotension in the operating room. BDPE’s fast onset of action and ability to be administered peripherally have prompted calls for its use in the Emergency Department (ED). There are few published data on the safety of BDPE use in the ED. Primary concerns include BDPE’s potential to cause dangerous hypertension or reflex bradycardia. We hypothesize that BDPE is a safe short-term vasopressor choice for hypotensive ED patients.

Methods: We conducted a structured chart review for all patients who received BDPE from preloaded syringes over 42 months. We defined an adverse event (AE) as sBP > 180, dBP > 110, or HR < 50 within 30 min of receiving BDPE. We defined a serious adverse event (SAE) as an AE with pharmacologic intervention to correct vital sign abnormality. We also compared mean arterial pressure (MAP), sBP, and dBP pre/post BDPE administration to assess effectiveness. We used a two-sample t-test to assess for differences between the mean delta MAP after low versus high-dose BDPE. Results: We identified 181 cases of ED use. 147 cases had complete pre/post vital signs. We identified 5 AEs and no SAEs. Three patients developed sBP > 180 mm Hg. The patients suffered no apparent harm. No patients had dBP > 110. Two patients developed bradycardia post-drug. In both cases, MAP improved despite bradycardia.

Conclusions: BDPE does not appear to cause reflex bradycardia or hypertension requiring intervention among hypotensive ED patients. The apparent safety of BDPE should be confirmed in prospective trials.
Reference:


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