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Effects of intraosseous and intravenous administration of Hextend® on time of administration and hemodynamics in a Swine model.

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Introduction: The military recommends that a 500mL bolus of Hextend® be administered via an intravenous (IV) 18-gauge needle or via an intraosseous (IO) needle for patients in hypovolemic shock.

Purposes: The purposes of this study were to compare the time of administration of Hextend and the hemodynamics of IV and IO routes in a Class II hemorrhage swine model.

Methods: This was an experimental study using 27 swine. After 30% of their blood volume was exsanguinated, 500mL of Hextend was administered IV or IO, but not to the control group. Hemodynamic data were collected every 2 minutes until administration was complete.

Results: Time for administration was not significant ($p = .78$). No significant differences existed between the IO and IV groups relative to hemodynamics ($p > .05$), but both were significantly different than the control group ($p < .05$).

Conclusions: The IO route is an effective method of administering Hextend.