The aim of this study was to evaluate the effectiveness of IV access versus IO access in terms of return of spontaneous circulation (ROSC) for patients suffering from cardiac arrest” Nguyen et al (2019).

Abstract:

OBJECTIVE: The prevailing standard of care in prehospital emergency medical services (EMS) is that either intravenous (IV) or intraosseous (IO) access is an acceptable route for obtaining vascular access and delivery of resuscitation medications and volume expanders in cardiac arrest patients. The aim of this study was to evaluate the effectiveness of IV access versus IO access in terms of return of spontaneous circulation (ROSC) for patients suffering from cardiac arrest.

METHODS: A retrospective chart review examining cardiac arrest data with a single advanced life support EMS agency over a 4-year period was performed. Cardiac arrest patients were identified from a quality assurance database. Exclusion criteria included trauma arrest, pediatrics, pregnancy, and obvious signs of death.

RESULTS: A total of 795 patients remained after applying the exclusion criteria. A total of 183 (45.1%) out of 406 cardiac arrest patients achieved ROSC who had an IV placed. A total of 389 cardiac arrest patients had an IO placed with ROSC in 100 (25.7%).
CONCLUSIONS: Higher ROSC rates were achieved with IV access versus IO access. Limitations include the small sample size, a single EMS agency, and the retrospective nature of the study. Future studies should further evaluate the effectiveness of IO versus IV access in cardiac arrest and other low perfusion states.

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