

To describe and compare vascular access practices used by en route care providers during medical evacuation (MEDEVAC)” Savell et al (2016).

Abstract:

OBJECTIVE: To describe and compare vascular access practices used by en route care providers during medical evacuation (MEDEVAC).

DESIGN: This was a retrospective cohort study. Medical records of US military personnel injured in combat and transported by MEDEVAC teams were queried.

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PATIENTS: The subjects were transported by military en route care providers, in the combat theater during Operation Enduring Freedom (OEF) between January 2011 and March 2014. The authors reviewed 1,267 MEDEVAC records of US casualties and included 832 subjects that had vascular access attempts.

MAIN OUTCOME MEASURES: The outcome measures for this study were vascular access success rates, including intravenous (IV) and intraosseous (IO) attempts. Subjects were grouped by type of vascular access: None, peripheral intravenous (PIV), IO, and PIV + IO (combination of PIV and IO) and by vascular access (PIV or IO) success (No versus Yes). Survival rate, in-flight events, ventilator, intensive care and in hospital days, and 30-day outcomes were compared among groups.

STATISTICAL ANALYSIS: The authors used chisquare or Fisher’s exact tests to evaluate categorical variables. Analysis of variance (ANOVA) or Kruskal-Wallis tests were used for continuous variables.

RESULTS: Vascular access was attempted in 832 (66 percent) of the 1,267 subjects transported by MEDEVAC during this study period. The majority (n = 758) of the access attempts were PIV of which 93 percent (706/758) were successful. In 74 subjects, IO was the only access attempted with an 85 percent (n = 63) success rate. The overall success rate

with IO placement was 88 percent.

CONCLUSIONS: Intraosseous access has been used successfully in the combat setting and accounts for approximately 12 percent of vascular access in the MEDEVAC population the authors studied.

Reference:

Savell, S., Mora, A.G., Perez, C.A., Bebart, V.S. and Maddry, M.J. (2016) En route intraosseous access performed in the combat setting. *American Journal of Disaster Medicine*. 11(4), p.225-231.

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