Within the registry, IO placement was relatively low (<10%) and used in casualties who received several other life-saving interventions at a higher rate than casualties who had IV access” Schauer et al (2019).

Abstract:

BACKGROUND: Peripheral intravenous (IV) cannulation is often difficult to obtain in a patient with hemorrhagic shock, delaying the appropriate resuscitation of critically ill patients. Intraosseous (IO) access is an alternative method. To date, few data exist on use of this procedure by ground forces in Afghanistan. Here, we compare patient characteristics and concomitant interventions among patients undergoing IO access versus those undergoing IV access only.

METHODS: We obtained data from the Prehospital Trauma Registry (PHTR). When possible, patients were linked to the Department of Defense Trauma Registry for outcome data. To develop the cohorts, we searched for all patients with documented IO or IV access placement. Those with both IO and IV access documented were placed in the IO group.

RESULTS: Of the 705 available patients in the PHTR, we identified 55 patients (7.8% of the population) in the IO group and 432 (61.3%) in the IV group. Among patients with documentation of access location, the most common location was the tibia (64.3%; n = 18). Compared with patients with IV access, those who underwent IO access had higher urgent
evacuation rates (90.9% versus 72.4%; \( p = .01 \)) and air evacuation rates (58.2% versus 14.8%; \( p < .01 \)). The IO cohort had significantly higher rates of interventions for hypothermia, chest seals, chest tubes, needle decompressions, and tourniquets, but a significantly lower rate of analgesic administration (\( p \leq .05 \)).

CONCLUSION: Within the registry, IO placement was relatively low (<10%) and used in casualties who received several other life-saving interventions at a higher rate than casualties who had IV access. Incidentally, lower proportions of analgesia administration were detected in the IO group compared with the IV group, despite higher intervention rates.

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- Tibial osteomyelitis following prehospital intraosseous access
- Intraarticular extravasation following intraosseous needle intravenous access
- Emergency department nurses role in establishing intraosseous access

Reference: