

“Both EZ-IO and BIG are shown to be reliable and safe methods for insertion of intravascular access in emergency conditions.” Demir et al (2014).

Reference:

Demir, O.F., Aydin, K., Akay, H., Erbil, B., Karcioğlu, O. and Gulalp, B. (2014) Comparison of two intraosseous devices in adult patients in the emergency setting: a pilot study. *European Journal of Emergency Medicine*. July 29th. .

Comparison of two intraosseous devices in adult patients [@ivteam](http://ctt.ec/a8awA+) #ivteam

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Abstract:

**OBJECTIVE:** To compare two intraosseous (IO) insertion devices in terms of safety and ease of use in patients who need urgent vascular access in the emergency setting following failed attempts for intravenous lines.

**METHODS:** This prospective, randomized clinical study compared two different IO access devices in adults ( $\geq 16$  years of age or weighing  $> 40$  kg) admitted to our emergency department with difficult peripheral venous access and in need of urgent intervention. The findings were compared in terms of the rates of successful insertion of spring-loaded impact-driven adult BIG and the battery-driven EZ-IO devices on the first attempt, difficulty of use, time taken to complete the insertion, and complication rates.

**RESULTS:** A total of 52 patients were enrolled and randomized for the study. IO access was performed in 26 patients using the BIG device and in 26 patients using the EZ-IO device. The rates of successful insertion of BIG and EZ-IO devices on the first attempt were 92.3 and 84.6%, respectively ( $P=0.668$ ). The time taken to complete the procedure was significantly greater in the EZ-IO group ( $5.2 \pm 2.2$  s) compared with the BIG group ( $2.8 \pm 1.2$  s) ( $P < 0.001$ ). Difficulty of use was scored using the visual analogue scale, which yielded the mean visual analogue scale for EZ-IO and BIG ( $25.4 \pm 12.6$  and  $8.6 \pm 6.4$  mm, respectively) ( $P < 0.001$ ). No mechanical problems or technique-related complications were encountered in any of the groups.

**CONCLUSION:** Both EZ-IO and BIG are shown to be reliable and safe methods for insertion of intravascular access in emergency conditions.

Other intravenous and vascular access resources that may be of interest (External links - IVTEAM has no responsibility for content).

- [Guide for intravenous chemotherapy and associated vascular access devices from Macmillan.](#)
- [CancerUK IV chemotherapy information.](#)

