

IO infusion should be implemented in all critical situations when peripheral venous access is not easily obtainable” Petitpas et al (2016).

Abstract:

BACKGROUND: Indications for intra-osseous (IO) infusion are increasing in adults requiring administration of fluids and medications during initial resuscitation. However, this route is rarely used nowadays due to a lack of knowledge and training. We reviewed the current evidence for its use in adults requiring resuscitative procedures, the contraindications of the technique, and modalities for catheter implementation and skill acquisition.

METHODS: A PubMed search for all articles published up to December 2015 was performed by using the terms “Intra-osseous” AND “Adult”. Additional articles were included by using the “related citations” feature of PubMed or checking references of selected articles. Editorials, comments and case reports were excluded. Abstracts of all the articles that the search yielded were independently screened for eligibility by two authors and included in the analysis after mutual consensus. In total, 84 full-text articles were reviewed and 49 of these were useful for answering the following question “when, how, and for which population should an IO infusion be used in adults” were selected to prepare independent drafts. Once this step had been completed, all authors met, reviewed the drafts together, resolved disagreements by consensus with all the authors, and decided on the final version.

RESULTS: IO infusion should be implemented in all critical situations when peripheral venous access is not easily obtainable. Contraindications are few and complications are uncommon, most of the time bound to prolonged use. The IO infusion allows for blood sampling and administration of virtually all types of fluids and medications including vasopressors, with a bioavailability close to the intravenous route. Unfortunately, IO infusion remains underused in adults even though learning the technique is rapid and easy.

CONCLUSIONS: Indications for IO infusion use in adults requiring urgent parenteral access and having difficult intravenous access are increasing. Physicians working in emergency departments or intensive care units should learn the procedures for catheter insertion and maintenance, the contraindications of the technique, and the possibilities this access offers.

Full Text

Reference:

Petitpas, F., Guenezan, J., Vendeuvre, T., Scepi, M., Oriot, D. and Mimos, O. (2016) Use of intra-osseous access in adults: a systematic review. *Critical Care*. 20(1), p.102.

doi: 10.1186/s13054-016-1277-6.

Thank you to our partners for supporting IVTEAM