



The aim of the study was to compare the success rates of the IO proximal tibia and proximal humerus head access performed by paramedics using the New Intraosseous access device (NIO; Persys Medical, Houston, TX, USA) in an adult cadaver model during simulated CPR” Szarpak et al (2016).

Abstract:

Medical personnel may encounter difficulties in obtaining intravenous (IV) access during cardiac arrest. The 2015 American Heart Association guidelines and the 2015 European Resuscitation Council guidelines for cardiopulmonary resuscitation (CPR) suggest that rescuers establish intraosseous (IO) access if an IV line is not easily obtainable. The aim of the study was to compare the success rates of the IO proximal tibia and proximal humerus head access performed by paramedics using the New Intraosseous access device (NIO; Persys Medical, Houston, TX, USA) in an adult cadaver model during simulated CPR. In an interventional, randomized, crossover, single-center cadaver study, a semi-automatic spring-load driven NIO access device was investigated. In total, 84 paramedics with less than 5-year experience in Emergency Medical Service participated in the study. The trial was performed on 42 adult cadavers. In each cadaver, 2 IO accesses to the humerus head, and 2 IO accesses to the proximal tibia were obtained. The success rate of the first IO attempt was 89.3% (75/84) for tibial access, and 73.8% (62/84) for humeral access (P=0.017). The procedure times were significantly faster for tibial access [16.8 (interquartile range, IQR, 15.1-19.9)s]

than humeral access [26.7 (IQR, 22.1-30.9)s] ( $P < 0.001$ ). Tibial IO access is easier and faster to put in place than humeral IO access. Humeral IO access can be an alternative method to tibial IO access.

TRIAL REGISTRATION: [clinicaltrials.gov](https://clinicaltrials.gov) Identifier: NCT02700867.

### Full Text

ReTweet if useful... First-attempt success between tibial and humeral intraosseous insertion  
<http://ctt.ec/2xKve+> @ivteam #ivteam

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Reference:

Szarpak, L., Truszewski, Z., Smereka, J., Krajewski, P., Fudalej, M., Adamczyk, P. and Czyzewski, L. (2016) A Randomized Cadaver Study Comparing First-Attempt Success Between Tibial and Humeral Intraosseous Insertions Using NIO Device by Paramedics: A Preliminary Investigation. *Medicine (Baltimore)*. 95(20), p.e3724.

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