

THE TELEFLEX
ACADEMY



IO Infusion Pain Management

Arrow® EZ-IO® Intraosseous Vascular Access System

IO Infusion Pain Management

Overview:

For patients able to perceive pain, there can be significant discomfort associated with the initial flush as well as the infusion process. Pressure changes occur within the bone as a result of infusion of medications and fluids. Infusion pain may be minimized with correct administration of 2% preservative-free and epinephrine-free lidocaine (intravenous lidocaine) in accordance with hospital protocols and policies.^{1,2}

Anesthetizing the intraosseous (IO) space prior to the initial flush should be considered by a qualified healthcare provider for any patient who is conscious/alert to pain^{1,2}. If time constraints do not permit anesthetization prior to the initial flush, pain management should be considered as necessary.

DISCLAIMER: Selection and use of any medication, including lidocaine, given IV or IO is the responsibility of the treating physician, medical director, or qualified prescriber and is not an official recommendation of Teleflex Incorporated. The information provided is a summary of information found in the cited reference materials. This information is not intended to be a substitute for sound clinical judgment or your institution's treatment protocols. Teleflex Incorporated is not the manufacturer of lidocaine. Users should review the manufacturer's instructions or directions for use and be familiar with all indications, side effects, contraindications, precautions and warnings prior to administration of lidocaine or any other medication. Teleflex Incorporated disclaims all liability for the application or interpretation of this information in the medical treatment of any patient. Any health care provider using this material assumes full responsibility for the medical care and treatment of their patients. For additional information please visit www.eziocomfort.com.

1. Paxton JH, Knuth TE, Klausner HA. Proximal humerus intraosseous infusion: a preferred emergency venous access. *J Trauma*. 2009;67(3):1-7. Research sponsored by Teleflex Incorporated.

2. Davidoff J, Fowler R, Gordon D, Klein G, Kovar J, Lozano M, Potkya J, Racht E, Saussy J, Swanson E, Yamada R, Miller L. Clinical evaluation of a novel intraosseous device for adults: prospective, 250-patient, multi-center trial. *JEMS* 2005;30(10):s20-3. Research sponsored by Teleflex Incorporated.

IO Infusion Pain Management

IO Infusion Pain Management Using 2% Lidocaine (preservative-free and epinephrine-free)

Review lidocaine manufacturer's IFU prior to administration and observe recommended cautions/contraindications.

With the stabilizer in place, carefully attach syringe directly to IO catheter luer-lock hub, without extension set in place

1

Slowly infuse initial dose of lidocaine over 120 seconds and allow to dwell for 60 seconds

ADULT: initial dose 40 mg

INFANT/CHILD: initial dose 0.5mg/kg (NOT to exceed 40 mg)

2

Flush IO catheter with normal saline

ADULT flush: 5-10 mL

INFANT/CHILD flush: 2-5 mL

3

Slowly infuse lidocaine (half of initial dose) over 60 seconds

4

Attach extension set primed with normal saline and flush

Repeat PRN. Consider systemic pain control for patients not responding to IO lidocaine

≥ 4 min total time

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