

PEDIATRIC INTRAOSSEOUS INFUSION PROCEDURE

ALWAYS USE STANDARD PRECAUTIONS

INDICATIONS

- Patient in extremis, cardiac arrest, or profound hypovolemia and in need of immediate delivery of medications or fluids and IV access is not possible in 90 seconds

CONTRAINDICATIONS

- Absolute:
 - Recent fracture of involved bone (less than 6 weeks)
 - Vascular disruption proximal to insertion site
 - Inability to locate landmarks
- Relative:
 - Infection, scarring or burn overlying the site
 - Congenital deformities of the bone
 - Metabolic bone disease

EQUIPMENT

- Automatic Intraosseous needle (IO) or manual device
- Betadine swabs/ solution/ gauze
- 5-12 ml syringe
- Lidocaine 2% (Preservative Free)
- Saline
- IV NS solution
- IV tubing with 3-way stopcock
- Supplies to secure infusion

PROCEDURE

- Aseptic technique must be followed at all times
- All approved ALS IV medications may be administered IO
- Position and stabilize leg
- Prepare skin with betadine swabs or solution on gauze
- Air or gauze dry
- Fill 5-12 ml syringe with 5 ml saline
- IV NS solution, flood tubing with a 3-way stopcock
- Automatic IO device:
 - Locate primary site 1-2 cm distal to the tibial tuberosity and 1-2 cm medial
 - Locate secondary site according to manufacturer's specification
 - Insert needle through skin at 90-degree angle to the periosteal surface (bone contact)
 - Rotate applying gentle, steady pressure, letting the driver do the work
 - Stop when a change of resistance is felt (indicating entrance into the medullary space)
 - Stabilize hub and remove stylet
 - Confirm placement
 - For patients >3kg: If awake and/or responsive to pain, infuse 2% Lidocaine 0.5mg/kg slowly (max dose = 40mg; treat according to the Pediatric Dosing Guide P18A). Allow the Lidocaine to work 30-60 seconds prior to administering fluids.
 - Attach 5-12 ml syringe with 5 ml saline to needle

- Syringe bolus with 5 ml saline
- Manual IO device:
 - 1 cm medial or distal to tibial tuberosity (0-6years)
 - 1-2 cm medial or distal to tibial tuberosity (6-12 years)
 - Choose the desired depth of injection (see packet insert for manufactures instructions)
 - Position needle, insert at 90 degrees, and remove devices following manufacturer's instructions
 - Confirm placement
 - For patients >3kg: If awake and/or responsive to pain, infuse 2% Lidocaine 0.5mg/kg slowly (max dose = 40mg; treat according to the Pediatric Dosing Guide P18A). Allow the Lidocaine to work 30-60 seconds prior to administering fluids.
 - Attach 5-12 ml syringe with 5 ml of saline in needle
 - Flush with 5 ml saline
 - Aspirate to confirm position, if needle flushes without resistance proceed
 - If resistance is met, remove needle and apply pressure to site
 - Attach pre-flooded IV tubing
 - Stabilize according to manufacturer's direction
 - Administer fluid boluses via syringe utilizing the 3-way stopcock

SPECIAL CONSIDERATIONS

- Limit attempts for IO access at scene to no more than 2