

Airlink Critical Care Transport

EZ IO Protocol

Section A – Objective

To obtain vascular access for the administration of medications or fluids.

Section B – Protocol

History/Indications:

1. For adults and pediatrics any time there is difficult or unsuccessful IV access with a need for fluids and/or medications.
2. Profound hypovolemia.
3. Altered level of consciousness.

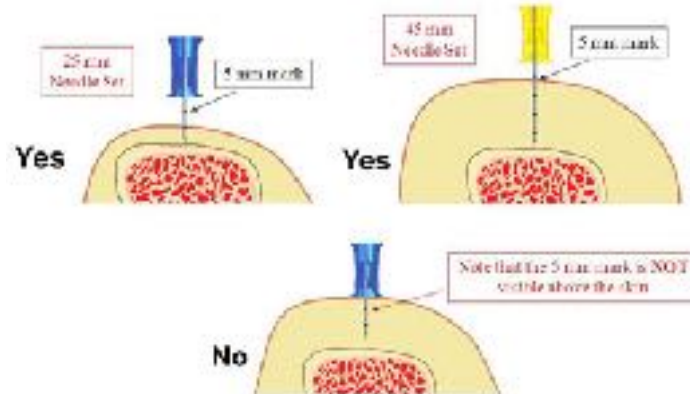
Assessment:

1. Contraindications:
 - a. Fracture of the bone selected for IO infusion.
 - b. Excessive tissue at insertion site with the absence of anatomical landmarks.
 - c. Previous significant orthopedic procedures (IO within 24 hours of the same bone, prosthesis).
 - d. Infection at the site selected for insertion.
2. Considerations:
 - a. Pain – If patient is conscious slowly administer 20-40 mg of 2% Lidocaine IO one minute prior to the initial bolus.
 - b. Flow Rates – “NO FLUSH = NO FLOW”
 - i. Administer rapid syringe bolus of 10 ml NS (if patient is less than 40 kg reduce flush amount to 5 ml NS).
 - ii. Repeat as needed.
 - iii. To improve continuous infusion flow use a pressure bag or infusion pump.
 - iv. Look for swelling around the site. If visualized DC the IO, and look for an alternate site.

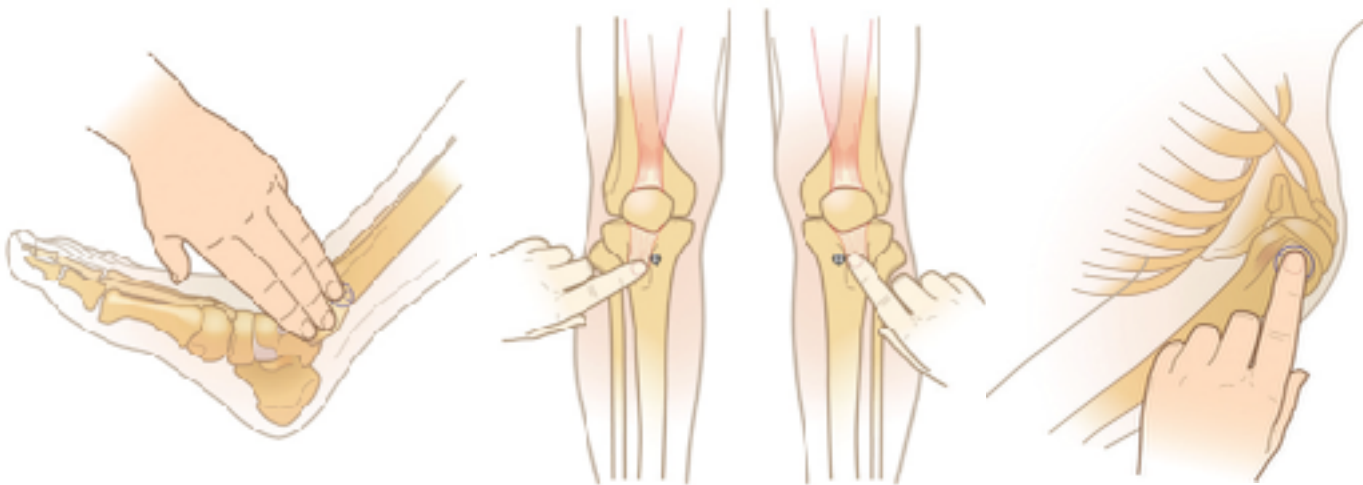
Procedure:

1. Select Site:
 - a. Proximal Humerus – Place patients arm across their stomach, and then palpate the proximal aspect of the humeral head.
 - b. Distal Tibia – Two finger widths above the medial malleolus.
 - c. Proximal Tibia – Medial flat surface of the tibia, two finger-widths below tibial tuberosity.
2. Clean Site

3. Select appropriate needle. (15 mm: 3-39 kg, 25 mm: >40 kg, 45 mm: Excessive Tissue)
4. Position the driver at the insertion site with the needle set at a 90-degree angle to the bone surface.
5. Gently pierce the skin with the Needle Set until the Needle Set tip touches the bone.
6. **Ensure visualization of at least one black line on the Needle**



7. Penetrate the bone cortex by squeezing driver's trigger and applying gentle, consistent, steady, downward pressure (allow the driver to do the work).
 - a. Do not use excessive force.
8. Release Driver's trigger and stop insertion process when:
 - a. A sudden "give" or "pop" is felt upon entry into the medullary space (pediatric patients may only have a decrease in resistance felt).
 - b. The desired depth is obtained.
9. Remove EZ-IO Power Driver from Needle Set while stabilizing the catheter hub
10. Remove stylet from catheter by turning counter-clockwise and immediately dispose of stylet in appropriate biohazard sharps container
11. Secure site with EZ Stabilizer
12. Connect primed EZ-Connect to exposed Luer-lock hub
13. Confirm placement with a syringe bolus – SEE CONSIDERATIONS.
14. Secure tubing
15. Place EZ-IO armband on patient, document time and date



References:

1. www.vidacare.com – EZ-IO® Intraosseous Infusion System.