



Amherst Fire District Procedure

Intraosseous - Adult

Clinical Indications:

- IO access can/will be used when a peripheral IV is unobtainable or unreasonable to use.

Contraindications:

- Fracture of the bone selected.
- Excessive tissue at insertion site with absence of anatomical marks.
- Previous significant orthopedic procedures (IO within last 24hrs, prosthesis, knee replacement)
- Infection at site.

Procedure:

1. Identify need for adult intraosseous infusion. Pt greater than 40kg.
2. Assemble equipment
3. Identify and select correct site for insertion, (proximal tibia, distal tibia, or humeral head.) and verify that contraindications do not exist with the selected site.
4. Prep skin over insertion site.
5. Prepare the EZ-IO driver, and the proper needle set.
6. Stabilize site and insert needle set. (*Remember to guide the needle, do not push on the EZ*)
7. Remove EZ-IO driver from needle while stabilizing catheter hub.
8. Remove stylet from cannula and place in a sharps disposal container.
9. Connect primed EZ connect. (*Primed with saline flush*). Aspirate into the EZ connect. The presence of a small amount of bubbly blood or fat provides positive confirmation of marrow space insertion, but the lack of either does not rule it out. Slowly flush with 10ml Normal Saline to test patency. It should flow freely. If there is increased resistance to injection, or if you detect increased circumference or increased firmness of soft tissues of the calf, it means that the needle has penetrated the posterior cortex of the tibia into the posterior tibial soft tissues, which necessitates removal of the device. A second attempt should then be made on the other leg only or the humerus.
10. Secure the cannula with a commercial device or stabilize with gauze padding.
11. To a conscious patient administer slowly 20mg lidocaine 2%. This may be done during the process of flushing.
12. Attach infusion set and fluid, and set rate at a minimum of 30cc/hr to insure infusion patency. Due to the smaller space of the IO. The flow rate will be slower than with a peripheral IV line.
13. Due to the internal pressure of the intraosseous space an IV pump or pressure bag must be used to infuse fluid.
14. Continually reassess extremity for signs/symptoms of extravasation/infiltration.
15. All prehospital intravenous medications can be administered via intraosseous infusion. After administration of any parenteral medication, flush w/10-20cc NS.
16. Place IO identification band on patient.

Certification Requirements:

- Initial Training Requirements will consist of initial training program consisting of video and physical demonstration, “hands-on” practice, return demonstration of skill, and written testing over procedure, as approved by Medical Director.