05-0819 – Pediatric Intraosseous

Authority

Health and Safety Code Division 2.5, California Code of Regulations, Title 22, Division 9

Purpose

To obtain rapid circulatory access to provide necessary intravenous fluids or medications for the LALS and ALS provider.

Approved Devices

EZ-IO, NIO (New Intraosseous Device) and a manual IO needle

For any device only, the proximal tibia is an approved site for pediatric IO.

Indications

1. Approved for use in the pediatric patient less than 12 years of age and/or less than 40 kg.
2. Consider for use in any cardiac arrest, unconscious, and/or critically ill or injured patient in whom IV access cannot be established in a timely fashion.

The EZ-IO needle can be used on patients between 3-39 kg.

The EZ-IO needle can be manually utilized on neonates less than 3 kg.

Contraindications

1. Inability to locate landmarks.
2. Fracture/deformity or recent surgery in the selected site.
3. Infection over the insertion site.
4. Congenital deformity or history of osteogenesis imperfecta or osteopetrosis.
5. Previous orthopedic procedure near the insertion site (Prosthesis or recent IO within the last 24 hours).

Possible Complications

1. Compartment syndrome.
2. Growth plate injury.
3. Skin or bone infection.
4. Bone fracture.
5. Embolus.
6. Bleeding or hematoma. If this occurs stop the infusion and apply pressure with sterile gauze.

Pain Management

1. If the procedure is performed on a conscious patient, immediately following placement of the IO needle, may administer 0.5 mg/kg 2% Lidocaine (not to exceed 50 mg) slowly through the IO site (try to have and use warmed lidocaine. Wait approximately 30–60 seconds before flushing with normal saline.
2. In the event a patient regains consciousness and complains of severe pain secondary to the IO insertion, temporarily stop infusing the fluids, and administer 0.5 mg/kg 2% Lidocaine (not to exceed 50 mg) slowly through the IO site. Wait approximately 30–60 seconds before continuing fluid administration. Caution with solution compatibility issues with Lidocaine.
3. If fluids do not flow freely, flush IO with an additional 10 ml of saline. Always use a pressure bag.