

External Jugular Vein Cannulation

Purpose:

To provide emergency vascular access on a child when peripheral access is difficult. The external jugular vein is a peripheral vein and therefore is within most providers' protocol/practice area.

Rationale:

The external jugular vein has many important attributes including that it is a relatively large peripheral vein, easy to cannulate, and it offers quick access to central circulation.

Location:

The external jugular vein lies superficially along the lateral aspect of the neck. It extends from the angle of the mandible and runs downward until it pierces the deep fascia of the neck just above the middle of the clavicle, and ends in the subclavian vein. Since it is a very superficial vein it tends to "roll" and be positional. Slight movement of the head may effect the flow of fluid.

Complications:

Trauma patients with potential cervical spine injuries should be approached with caution. The risk of air embolism can be reduced by using a syringe attached to the angiocath during insertion. There is also a remote danger of pneumothorax.

Technique

1. Position the patient in the supine, head down position, rotate the head to the opposite side. Infants* can be positioned at the edge of an exam table and have their head lowered. (*This is a 3 person technique)
2. Prep the skin aseptically.
3. Apply digital pressure to the vein distally (just above the clavicle). This will often assist by distending the vein. Applying slight traction at the proximal portion of the vein with the thumb may prevent the vein from rolling.
4. Insert the needle in the middle of the vein, remembering its superficial position.
5. Aspirate after puncturing the skin and immediately upon seeing a flashback, thread the catheter. Stop if you meet resistance.
6. Secure well.
7. Keeping the head in a neutral position seems to optimize IV flow.