

## **Standard operating procedure for peripherally inserted central catheter (PICC) line insertion**

### 1. Pre-procedure preparation:

- The neonatal team reviews the infant's medical history, current condition, and reasons for requiring a PICC line.
- Informed consent is obtained from the parents or legal guardians.
- The team ensures that the necessary medical supplies are available, including a PICC kit containing appropriate size catheter, sterile dressing, securing device, flushing solutions, and other required equipment.

### 2. Perform hand hygiene and put on sterile gloves, a surgical mask, gown and eye protection.

3. The infant is placed in a safe and comfortable position, with appropriate monitoring of vital signs. The area where the PICC line will be inserted is cleaned and disinfected using antiseptic solutions. Sterile drapes to be used.

### 4. Procedure :

-The line should be flushed with 0.9% sodium chloride for injection prior to placement and the clamp closed. This will help prevent occlusion whilst awaiting an X-ray.

-Sterilise the skin around the insertion site according to standard sterile technique. Allow the sterilising solution to dry completely before commencing insertion. Contact with antiseptic solutions may weaken the lines and cause premature failure.

-Insert the introducer until flashback is noted or free-flowing blood is obtained. Insert the long line and use non-toothed forceps to gently advance the line.

-Do not insert the line further than the optimum insertion distance measured before the procedure

-If the line will not advance to the measured distance, the tip may have entered the origin of adjoining vessel. Attempts can be made to bypass this by withdrawing the line and then attempting further advancement. Do not leave the tip sitting against such an obstruction.

-Once successfully inserted, remove the introducer and apply gentle pressure to the insertion site until all oozing of blood around the PICC line has stopped

-Secure the line in place with a steristrip close to the entry site then cover the line with a Tegaderm dressing (or similar semi-permeable clear dressing) ensuring that all of the polyurethane part of the catheter is covered. This will involve looping the redundant portion around the entry site

-The position of the line should be determined before TPN or drugs are infused through it. A 10% glucose infusion may be commenced prior to confirmation of line position if hypoglycaemia is a significant risk

-The optimal position for the distal tip of a PICC line is in the SVC or IVC but clearly outside the cardiac silhouette.

Document the procedure in the patient's medical record, including the date, time, and any complications encountered.

For a PICC line inserted in an upper limb or scalp vein the tip should be within the SVC but above T4

For a PICC line inserted in a lower limb the tip should be within the IVC but below T9 and lie to the right side of the spinal column. (this will require care to ensure the baby is not rotated at the time the X-ray is taken)